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CATALOGUE

OF THE

SPECIMENS

OF

NEUROPTEROUS INSECTS

IN

THE COLLECTION

OF THE

BRITISH MUSEUM.

PART I.—(PHRYGANIDES—PERLIDES).

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LONDON, 1852.

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INTRODUCTION.

THE principal object of the present Catalogue has been to give a complete list of the specimens of Neuropterous Insects contained in the collection of the British Museum, indicating at the same time the peculiarities of each, as regards variation of character, locality, and the source from whence it has been derived. With this view, the different individuals of each species contained im the collection are indicated by the letters *a*, *b*, *c*, &c., following the name of the species and its synonymes, and the description, if it appeared to have been before undescribed.

This part of the Catalogue of Neuropterous Insects has been prepared and the new species described by Mr. FRANCIS WALKER, so well known for his attention to this order of Insects.

The continuation is in hand, and will follow as soon as it can be completed.

JOHN EDWARD GRAY.

British Museum,

1st September, 1852.

CATALOGUE

OF

NEUROPTEROUS INSECTS.

Order NEUROPTERA.

Neuroptera, *Linn. &c.*
Synistata p., et Odonata, *Fabr.*
Dictyoptera, *Clairv.*

Sub-order I. PHRYGANIDES.

Ocelli tres, primus inter antennas deorsum spectans. Partes oris inter se connatæ, labro subcoriaceo inflexo, mandibulis nullis, maxillarum mandibulis obsoletissimis, palpis maxillaribus tri-quadri- vel in omnibus feminis quinque-articulatis, labialibus triarticulatis. Antennæ elongatæ aut longissimæ, setaceæ, multiarticulatæ, articulis cylindricis. Prothorax transversus. Abdomen compressum, segmentis novem, appendicibus caudalibus coriaceis. Coxæ exsertæ, retrorsum vergentes; tibiæ calcaratæ; tarsi quinque-articulati, spinulosi, plantula aroliisque inter ungues instructi. Alæ quatuor deflexæ, quoad nervaturam æquales, quoad consistentiam et picturam inæquales; anticæ coriaceæ, pilosæ, absque nodo, cum thyridio in tertio radii principalis ramo; posticæ diaphanæ. plicatæ. Metamorphosis semicompleta per larvas aquaticas, hexapodas, mandibulis liberis instructas, branchio-pneustas, in folliculo sibi constructo hamis analibus affixas ad nymphas immobiles, artubus solutis, imagini stigmatibus respiranti similes.

Caput transversum, longitudine latius. Oculi magni, reticulati. Antennæ corporis longitudine aut longiores, articulis plurimis minime notatis. Os capite infero insertum. Labrum inflectum, mediocre. Palpi labiales articulo 3o ovato elongato. Thorax latitudine altior. Prothorax cerviciformis. Abdomen sæpissime subcompressum, apice truncatum. Larva aquatica, sæpissime thecæ opifex et tritor. Caput corneum. Thorax coriaceus. Abdomen sacculis respiratoriis, segmentum ultimum uncis duobus munitum.

Phryganea p., *Linn.*
Phryganea, *DeGeer; Geoffroy; Fabr.; Olivier.*
Friganides p., *Latr.* (*olim*); *Lamarck.*
Agnatha p., *Duméril.*
Plicipennia, *Latr.*
Lophiacera, *Billberg.*
Trichoptera, *Leach; Kirby; Stephens; Westw.; Kolenati.*
Phryganides, *Pictet.*
Trichoptera (Phryganides), *Rambur.*
Trichoptera (Phryganodea), *Burmeister.*
Elingula, *Retzius.*

Fam. 1. PHRYGANIDÆ.

Phryganidæ, *Stephens, Illust. Brit. Ent. Mand.* vi. 203.

Palpi maxillares mediocres, subhirsuti. Antennæ setaceæ. Pedes calcarati. Alæ anticæ venis transversis; posticæ plicatæ.

Heteropalpoidea p., *Kolenati.* (Palpi maxillares quoad sexum difformes, fœminarum semper articulis quinque, marum aut tri- aut quadriarticulati. Palporum maxillarium articulus ultimus reliquis quoad latitudinem æqualis. Larvæ incolunt thecas, omnes fere herbivoræ, branchiis simplicibus et ventralibus, nunquam compositis lateralibus, hanc et appendicibus analibus simplicibus, imagines de die aut ad vesperas nunquam turbatim et tumultuariter volitant).

Group I. PHRYGANEOIDEA.

Palpi maxillares tantum tenuissime pubescentes, maris articulis quatuor. Tibiæ anticæ bicalcaratæ, calcaribus acutis et immobilibus. Alarum anticarum anastomosis postica cum margine postico parallela, areolis subapicalibus longitudine æqualibus, anastomosi basali nulla, costula gemina inferius bipartita et foro cubitali modico, areolis apicalibus in sculptura a reliquis non differentibus.

Larvæ corpus depressum, utrinque angustius, capite oblongo-ovali. Prothorax solus corneus semilunaris, transversus. Abdominis segmenta soluta, distincte infibulata; appendices anales carnosæ, longiores, conicæ. Branchiæ simplices, longæ, patentes. Pedes breves, ad posticos paullo longitudine increscentes. Theca semper cylindrica, e plantarum frustulis.

Pupa magis depressa, recens semper viridis, torulis iisdem in abdominis dorso corneis, postea viridi-fusca aut fusco-nigra, abdominis segmentorum insterstitiis viridibus, thorace profunde sulcato, ore protracto, absque penicillo, segmento primo abdominis in dorso processu corneo deorsum vergente, appendicibus in segmento anali brevibus.

Phryganeoidea, *Kolenati, Gen. et Sp. Trich.* 77.

Genus 1, PHRYGANEA.

Corpus subcompressum, non depressum. Palpi maxillares tenuissime pubescentes aut subnudi, maris 4-articulati; articulo ultimo brevi, subelliptico. Tibiæ setigeræ; anticæ bicalcaratæ; intermediæ tricalcaratæ; calcares immobiles, acutæ. Alæ anticæ pilosæ, vix setigeræ, apice parabolice rotundatæ.

Phryganea, *Uddman, Linn., Fabr., Billbg., Schæff., Gmel., Schr., Steph., Curt., Zett., Fischer, Burm., Hummel, Westw., Wood.*
Semblis, *Fabr.*
Simblis, *Billbg.*
Holostomis* et Trichostegia,† *Kolenati.*
Olostomis, *Guér. et Perch. Gen. Ins.* 4, 9. *Neur.* pl. 3.

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* Holostomis, *Mannerheim, Revue Critique*, 21. *Kolenati, Gen. et Sp. Trich.* 82.

Tibiæ vix spinulosæ, calcaribus brevibus et spinis brevissimis, parcis, adpressis; alarum anticarum interstitiæ rugulosæ, vix pilosæ, alæ anticæ cum posticis concolores, areola 5a in ala antica anastomosim non attingens, brevis.

† Trichostegia, *Kolenati, Gen. et Sp. Trich.* 84, 17, pl. 2, f. 17.

Alæ anticæ cum posticis discolores, apice parabolice rotundato, interstitiis pilis densis et adpressis tectis, radio subcostali cum sectore apicali primo solum in ala per anastomosim juncto, ramo thyrifero cum cubito in alis anticis per anastomosim ad basim juncto, palporum labialium articulo apicali elliptico et compresso; tibiæ intermediæ et posticæ quadricalcaratæ.

1. Phryganea grandis.

Obscure fusca, supra cinereo-pubescens; alæ anticæ vittatæ areolis dense pilosis, maris fusco-testaceæ maculis parvis confertissimis pallidioribus punctoque albido, fœmine fusco-cinereæ nebulis pallidioribus lineolisque duabus interruptis nigris punctoque albo; tibiæ unicolores. Long. 4—9; alar. 18—28 lin.

Phryganea grandis, *Linn. Syst. Nat.* 1, 2, 909, 7. *Faun. Suec. ed.* 2, 1485. *Roesel, Ins. Belust.* 11. *Aquat.* 11, pl. 17. *Sulzer, Hist. Ins.* pl. 29, f. 9. *Réaum. Ins.* iii. pl. 14, f. 4. *Deg. Ins.* ii. 1, 507, pl. 13, f. 1. *Billbg. En. Ins.* 94. *Schæff. Icon.* pl. 180, f. 1, 2, Mas. pl. 109, f. 3, 4, Fœm. *Fabr. Sp. Ins.* i. 389, 8. *Mant. Ins.* i. 245, 9. *Ent. Syst.* ii. 76, 9. *Gmel. ed. Syst. Nat.* i. 5, 2633, 7. *Stew. Elem. Nat. Hist.* ii. 213. *Panz. Faun. Germ.* pl. xciv. f. 18. *Shaw, Gen. Zool.* vi. 255; pl. 82, f. inf.. *Wood, Ill. Lin. Gen. Ins.* ii. 25, pl. 48. *Kirby and Sp. Intr. Ent.* iii. 68, pl. 3, f. 4. *Turt. Syst. Nat.* iii. 396. *Leach, Ed. Enc.* ix. 136. *Schr. Ins. Austr.* 310, 618, 11, pl. 48. *Steph. Ill. Brit. Ent. Mand.* vi. 205, 1. *Curt. Brit. Ent.* xiii. 592, 1. *Burm. Handb. Ent.* ii. 2, 934, 3. *Zett. Ins. Lapp.* 1061, 3. *Westw. Introd. Class.* ii. pl. 48. *Syn.* 49. *Ramb. Hist. Nat. Ins. Neur.* 470, 1.

Trichostegia grandis, *Kol. Gen. et Sp. Trich.* 84, 1.

Mas.—Phryganea Beckwithii, *Leach, MSS. Steph. Ill. Brit. Ent. Mand.* vi. 206, 2.

Phryganea fulvipes, *Burm. Handb. Ent.* ii. 2, 934, 4.

a—h. England.
i—u. ——— ? From Mr. Children's collection.
w. Versailles.
x. ——— ?

2. Phryganea cinerea.

Testacea, supra cinereo vittata; alæ anticæ fuscæ, pubescentes, cinereo confertim guttatæ; alæ posticæ fusco-cinereæ.

Phryganea cinerea, *Barnston, MSS.*

Testaceous, with a broad gray dorsal stripe extending from the head to the tip of the abdomen: tips of anterior tibiæ and of the joints of the anterior tarsi black: fore-wings brown, downy, thickly covered with gray dots; the posterior or cubital anastomosis and the form of the adjoining subapical areolets vary according to the sex

as in other species: hind-wings brownish. Length of the body 7—8 lines; of the wings 22—26 lines.

a, *b*. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

3. PHRYGANEA VARIA.

Cinereo-fusca, antennæ fulvæ, fusco annulatæ; alæ anticæ vittatæ, nigro alboque variæ, puncto niveo, areolis dense pilosis; pedes fulvi, fusco annulati. Long. 5—7; alar. 11—16½ lin.

Phryganea varia, *Fabr. Ent. Syst.* ii. 77, 10. *Réaum. Ins.* iii. pl. 14, f. 9. *Deg. Ins.* ii. pl. 13, f. 1. *Fourcroy, Ent. Par.* ii. 357, 13. *Stew. El. Nat. Hist.* ii. 2, 14. *Turt. Syst. Nat.* iii. 396. *Donov. Brit. Ins.* viii. pl. 277, f. 1. *Burm. Handb. Ent.* ii. 1, 934, 2. *Pictet, Rech. Phryg.* 160, 31, pl. 11, f. 1. *Steph. Ill. Brit. Ent. Mand.* vi. 206, 4. *Zett. Ins. Lapp.* 1061, 4. *Westw. Intr. Class.* ii. 63, f. 68, 9. *Ramb. Hist. Nat. Ins. Neur.* 471, 2.

Phryganea variegata, *DeVill. Ent. Linn.* iii. 44, 60. *Hummel, Ess. Ent.* ii. 23.

Phryganea annularis, *Oliv. Enc. Méth. Ins.* 558, 16.

Trichostegia varia, *Kol. Gen. et Sp. Trich.* 86, 2.

a—*c*. England.

d. Malaga. Presented by Benjamin Frend, Esq.

e—*k*. ———? From Mr. Children's collection.

Genus 2. TRICHOSTEGIA.

1. TRICHOSTEGIA MINOR.

Fusco-ochracea; alæ anticæ ochraceæ, fasciatæ, nigro-fusco nebulosæ, macula costali fusca fasciaque subrepanda postica albido-ochracea. Long. 3½—5; alar. 9—12 lin.

Phryganea minor, *Curt. Brit. Ent.* xiii. pl. 592. *Steph. Ill. Brit. Ent. Mand.* vi. 207, 5.

Phryganea mixta, *Burm. Handb. Ent.* ii. 2, 934, 1.

Phryganea tortriceana, *Ramb. Hist. Nat. Ins. Neur.* 471, 3.

Trichostegia minor, *Kol. Gen. et Sp. Trich.* 8, 7, 3.

a—*d*. England.

Genus 3. HOLOSTOMIS.

1. Holostomis Altaica.

Alæ posticæ margine maculato.

Phryganea Altaica, *Fischer de Waldh. Ent. Ruth.* i. 2. *Neur.* pl. 2, f. 2.
Phryganea phalænoides, var., *Zett. Ins. Lapp.* 1061, *Nota.*
Anabolia (Holostomis) Altaica, *Kol. Gen. et Sp. Trich.* 83, 5.

North Europe.

2. Holostomis phalænoides.

Nigra; tibiis tarsisque posticis flavis, tibiis vix spinulosis, calcaribus brevibus; alis albidis, anticis maculis atro-violaceis majoribus et minoribus, posticis maculis similibus in margine antico et limbo externo.

Phryganea phalænoides, *Uddman, Novæ Insectorum Sp. Dissert. Acad. Aboæ*, 1753, 26, 53, pl. 2, f. 16. *Linn. Syst. Nat.* i. 2, 908, 3. *Faun. Suec.* 1481. *Gmel. ed. Syst. Nat.* i. 5, 2631, 3. *Turt. Syst. Nat.* iii. 396. *Steph. Ill. Brit. Ent. Mand.* vi. 207, 6. *Zett. Ins. Lapp.* 1060, 14, 1.
Simblis phalænoides, *Fabr. Sp. Ins.* i. 386, 5. *Mant. Ins.* i. 244, 5. *Ent. Syst.* ii. 73, 6.
Simblis phalænoides, *Billbg. Enum. Ins.* 94.
Phryganea Daurica, *Fisch. Entom. Ruth.* i. 52, 1. *Neur.* pl. 2, f. 1. *Hummel, Ess. Ent.* iii. 31.
Phryganea phalænodes, *Burm. Handb. Ent.* ii. 2, 935, 8.
Olostomis phalænoides, *Guér. et Perch. Gen. Ins. livr.* 4, 9. *Neur.* pl. 3.
Holostomis phalænoides, *Mannerheim, Revue Critique*, 21.
Anabolia (Holostomis) phalænoides, *Kol. Gen. et Sp. Trich.* 82, 4.
Oligotricha phalænoides, *Ramb. Hist. Nat. Ins. Neur.* 472, 2.

a. ——— ? From Mr. Birch's collection.
b, c. ——— ? From Mr. Children's collection.
d. Hungary.

Genus 4. NEURONIA.

Palpi labiales articulo apicali crassiori, ovali, lato et compresso: tibiæ anticæ bicalcaratæ, posteriores quadricalcaratæ: alæ anticæ cum posticis concolores, apice rotundato, interstitiis glabris; radius subcostalis cum sectore apicali primo solum in alis posticis per

anastomosim junctus, in alis anticis cum subcosta ad basim in anastomosi.

Neuronia, *Leach, MSS. Steph. Ill. Brit. Ent. Mand.* vi. 234.
Anabolia, *Kolenati, Gen. et Sp. Trich.* 79, 16.

1. NEURONIA RETICULATA.

Nigra; caput subconvexum, in medio carinula longitudinali; tibiæ posticæ flavæ; alæ anticæ virescenti-flavæ, nitidæ, crebre fusco-reticulatim maculatæ, margine apicali dentato nigro; alæ posticæ viridi-flavæ, fascia discali, maculis duabus costalibus limboque apicali dentato nigris.

Phryganea reticulata, *Linn. Syst. Nat.* i. 2, 908, 4. *Faun. Suec.* 1482. *Fabr. Sp. Ins.* i. 388, 1. *Mant. Ins.* i. 245, 1. *Ent. Syst.* ii. 75, 1. *Gmel. ed. Syst. Nat.* i. 5, 2632, 4. *Turt. Syst. Nat.* iii. 395. *Billbg. En. Ins.* 94. *Panz. Faun. Ins. Germ.* lxxi. 5. *Zett. Ins. Lapp.* 1061, 2. *Burm. Handb. Ent.* ii. 2, 935, 7.
Philopotamus? reticulatus, *Steph. Ill. Brit. Ent. Mand.* vi. 170, 4.
Anabolia (Oligostomis) reticulata, *Kol. Gen. et Sp. Trich.* 81, 2.
Oligotricha reticulata, *Ramb. Hist. Nat. Ins. Neur.* 472, 1.
Phryganea flavilatera, *Linn. Faun. Suec.* 1488. *Syst. Nat.* ii. 909. *Geoffr. Ins. Par.* ii. 255, 3. *Gmel. ed. Syst. Nat.* i. 5, 2634, 10. *Berk. Syn.* i. 151. *Stew. El. Nat. Hist.* ii. 214.

Europe.

2. NEURONIA CLATHRATA.

Nigra; capite plano et occipite torulo utrinque transverso; palpis, apice femorum, tibiis tarsisque testaceis; alis virescenti-aurantiacis, nitidis, anticis crebre reticulatim nigro maculatis, margine apicali undulato nigro, posticis umbra basali, fascia discali lata margineque apicali dentato, nigris.

Phryganea clathrata, *Hoffmansegg, MSS.*
Anabolia (Oligostomis) clathrata, *Kolenati, Gen. et Sp. Trich.* 82, 3.

Sweden, Prussia, Russia, Carniolia.
a—g. ——— ? From Mr. Children's collection.

3. NEURONIA PARDALIS.

Atra; caput subtus luteum; thorax antice luteo-hirtus; alæ anticæ luteo confertim guttatæ; alæ posticæ antice luteo guttatæ, fascia lata subapicali lutea.

Black: head with luteous hairs above, luteous beneath: thorax with luteous hairs in front: fore-femora ferruginous: fore-wings

with numerous luteous dots which are mostly confluent in the middle of the wing of the male: hind-wings with a few luteous spots along the fore border and with a broad luteous band extending obliquely from the tip along part of the hind border. Length of the body 6—7 lines; of the wings 22—24 lines.

a, b. Nova Scotia. From Lieut. Redman's collection.

4. NEURONIA CONCATENATA.

Rufa; antennæ piceæ; pedes testacei; abdomen fuscum; alæ subhyalinæ, anticæ fusco reticulatæ.

Red, shining: head and thorax clothed with whitish hairs: antennæ piceous: abdomen brownish: legs testaceous: fore-wings pale brown, with very numerous almost colourless dots which are mostly confluent and especially so towards the base: hind-wings subhyaline, their tips reticulated with brown; a brown spot on the fore border opposite one on the fore-wing; a few pale brown marks on the hind border. Length of the body 5—6 lines; of the wings 16—18 lines.

a, b. St. John's Bluff, East Florida. Presented by E. Doubleday, Esq.
c, d. Georgia. From Mr. Abbot's collection.
e. ———? From Mr. Children's collection.

5. NEURONIA OCELLIFERA.

Testacea; capite thoraceque supra nigris; antennæ nigræ, apices versus ferrugineæ; alæ anticæ nigro subreticulatæ et subfasciatæ.

Fem.—Black, with black hairs and bristles: antennæ ferruginous at the tip of each joint except towards the base, and wholly ferruginous towards the tips: breast, abdomen and legs testaceous: wings testaceous: fore-wings irregularly reticulated with black, which here and there forms short and irregular bands: hind-wings with a broad curved black band near the tips. Length of the body 5½ lines; of the wings 19 lines.

a. North America. Presented by the Entomological Club.

6. NEURONIA OCELLIGERA.

Nigra; tibiæ piceæ; alæ testaceæ, anticæ nigro reticulatæ.

Male.— Black, with pale hairs and black bristles: shanks pitchy: wings testaceous; fore-wings reticulated with black, which

forms spots along the borders: hind-wings with black spots along the borders. Length of the body 4½ lines; of the wings 13 lines.

a. Nova Scotia. From Lieut. Redman's collection.

7. Neuronia fusca.

Nigra; antennæ ferrugineæ; pedes testacei; alæ anticæ ferrugineæ fusco confertim reticulatæ maculisque duabus fuscis.

Phryganea fusca, *Barnston's MSS.*

Black, clothed with brown hairs: antennæ ferruginous: abdomen beneath and legs testaceous: fore-wings ferruginous, thickly reticulated with brown, with a brown spot on the hind border and another in the disk at the base of the intermediate subapical areolets; a few brown transverse streaks on the fore border: hind-wings slightly gray. Length of the body 6—8 lines; of the wings 18—24 lines.

Var. *β*. Body ferruginous.

a—e. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.
f—i. Nova Scotia. From Lieut. Redman's collection.
j. Newfoundland. Presented by W. E. St. John, Esq.
k. ——— ?

8. Neuronia antica.

Ferruginea; palpi pedesque testacei; alæ anticæ sublurida, confertim tuberculatæ, fascia brevi gracili discali; alæ posticæ subhyalinæ.

Ferruginous: palpi and legs testaceous: fore-wings slightly lurid, with numerous little brown pimples of various size in the areolets, and with a short slender band in the disk: hind-wings subhyaline. Length of the body 5—6 lines; of the wings 18—20 lines.

a, *b*. Georgia. From Mr. Abbot's collection.

9. Neuronia postica.

Fusca; palpi pedesque testacei; abdomen nigro trivittatum; alæ anticæ fusco reticulatæ, posticæ fascia brevi angulata fusca.

Ferruginous: palpi and legs testaceous: abdomen with three blackish stripes: fore-wings indistinctly and very minutely reticulated with brown, which colour is most prevalent at the tips: hind-

wings paler, with a short angular brown band in the disk towards the tip. Length of the body 7 lines; of the wings 20—22 lines.

a, *b*. Georgia. From Mr. Abbot's collection.

10. Neuronia vestita.

Ferruginea; thorax fusco bivittatus; alæ anticæ fusco confertim irroratæ, posticæ cinereæ.

Ferruginous: thorax with two brown stripes: thighs and tips of the shanks of the anterior legs brown: hind-legs testaceous: fore-wings thickly reticulated with brown, which is most prevalent towards the tips: hind-wings gray, bordered with brown. Length of the body 6 lines; of the wings 18 lines.

a, *b*. Georgia. From Mr. Abbot's collection.

11. Neuronia commixta.

Nigra; corpore subtus antennis pedibusque ferrugineis; alæ anticæ fuscæ, macula magna discali sublimpida, guttis apicalibus albidis; alæ posticæ subcinereæ, apice margineque postico fuscis.

Black, clothed with pale hairs, beset with black bristles, under side, antennæ and legs ferruginous: fore-wings brown; discal areolet, discal cell and areolet of the thyridium mostly almost colourless; fore border slightly mottled; apical and subapical areolets with whitish dots; veins brown: hind-wings slightly gray, brown at the tips and along the hind borders. Length of the body 4½ lines; of the wings 12 lines.

a. Georgia. From Mr. Abbot's collection.

12. Neuronia fuscula.

Ferruginea, nigro-hirta, subtus testacea; thorax maculis duabus subfuscis; tibiæ anteriores apice fuscæ; alæ cinereæ, anticæ albido irroratæ.

Phryganea fuscula, *Barnston's MSS.*

Ferruginous, partly clothed with black hairs, testaceous beneath: thorax with a brownish mark on each side: legs testaceous; anterior shanks black towards the tips: wings gray: fore-wings

with whitish dots which are more numerous along the border than in the disk. Length of the body 4½ lines; of the wings 12 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

13. NEURONIA RUFICRUS.

Nigro-fusca; tibiæ posticæ ochraceæ, alæ subochraceo-fuscescentes, venis piceis. Long. 5—7.; alar. 10—15 lin.

Phryganea ruficrus, *Scop. Ent. Carn. Schr.*
Neuronia fusca, *Steph. Ill. Brit. Ent. Mand.* vi. 234, 1.
Phryganea striata, *Burm. Handb. Ent.* ii. 2, 935, 6.
Anabolia analis, *Kol. Gen. et. Sp. Trich.* 80, 1.
Phryganea chloroneura, *Ramb. Hist. Nat. Ins. Neur.* 473, 3.

a. England.

14. NEURONIA? SUBFASCIATA.

Phryganea fasciata, *Say.*

Philadelphia.

Genus 5. AGRYPNIA.

Corpus latum depressum: palpi labiales articulo 3o vix crassiori et ovali: tibiæ anticæ bicalcaratæ, posteriores quadricalcaratæ: alæ anticæ pube tenui tectæ, apice antice parabolico oblique rotundato postice subangulato, radius subcostalis cum sectore apicali in alis quatuor in anastomosi; alæ posticæ hyalinæ.

Agrypnia, *Curt. Brit. Ent.* xii. 540; *Steph.*; *Kolenati.*
Phryganea p., *Roesel*; *Burm.*
Phryganea p.? *Réaum.*; *Zett.*

1. AGRYPNIA PAGETANA.

Ochracea; tibiæ spinis testaceis; alæ immaculatæ, apice subfuscescentes. Long. 4; alar. 12 lin.

——— *Roesel*, ii. *Aquat.* ii. pl. 14.
Agrypnia Pagetana, *Curtis, Brit. Ent.* xii. 540. *Steph. Ill. Brit. Ent. Mand.* vi. 229, 1. *Westw. Class.* ii. *Synops. Generic.* 49. *Kol. Gen. et Sp. Trich.* 78, 1.
Pyganea ægrota, *Burm. Handb. Ent.* ii. 2, 935, 5.
Phryganea striata, *Burm. Handb. Ent.* ii. 935, 6.

Phryganea testacea? *Réaum. Ins.* iii. pl. 18, f. 11. *Zett. Ins. Lapp.* 1065, 23.

a. (Type specimen). Yarmouth. Presented by W. Fisher, Esq.

2. AGRYPNIA PICTA.

Tibiæ spinis fuscis.

Agrypnia picta, *Kol. Gen. et Sp. Trich.* 79, 2.

Silesia.

Group 2. LIMNOPHILOIDEA.

Palpi maxillares maris articulis tribus: tibiæ anticæ unicalcaratæ, calcaribus acutis ac immobilibus: alarum anticarum subcosta cum costa nunquam in anastomosi, radio subcostali sub parastigmate flexo: alæ posticæ anastomosi postica obliqua, ita ut areolæ subapicales retrorsum longitudine decrescant, et anastomosi basali distincta, costulis tendinis geminis simplicibus et foro cubitali amplo, areolis apicalibus punctulatis et subpilosis.

Larvæ corpus omnino cylindricum: caput ovale: thorax segmentis duobus corneis, quadrangularibus transversis: abdomen segmentis minus solutis et non infibulatis, appendicibus analibus carnosis cylindricis brevibus et crassis: branchiæ simplices, breves, adpressæ: pedes postici paullo longiores. Theca frequentius ex arena et lapillis, semper conico-cylindrica, subtus angustior.

Pupa cylindrica, recens semper flava, segmento abdominis dorsali duobus, segmento quinto quatuor torulis corneis, fuscis, postea evadit fusca aut ferruginea, abdominis segmentorum interstitiis tantum flavis, thorace jam sulcato, ore protracto, penicillo verticali erecto instructo, segmento anali appendicibus duobus longis, filiformibus.

Limnophiloidea, *Kolenati, Gen. et Sp. Trich.* 35.

Genus 6. HALESUS.

Corpus subcompressum, non depressum: palpi maxillares maris triarticulati, articulo ultimo elongato filiformi: antennæ articulo basali capite breviori: tibiæ setigeræ, anticæ unicalcaratæ, posteriores triarticulatæ: alæ anticæ latæ, pilosæ, vix setigeræ, apice dilatatæ, rotundatæ, margine postico rotundato, rugulis in areolis inermibus, radio thyrifero cum cubito antico in anastomosi.

Halesus, *Steph. Ill. Brit. Ent. Mand.* vi. 201. *Westw. Kol. Gen. et Sp. Trich.* 68, pl. 1, f. 10.

Phryganea p., *Schr.*, *Vill.*, *Oliv.*, *Pictet*, *Zett.*
Limnophilus p., *Burm.*
Halenus, *Leach.*
Anabolia (Drusus), *Steph.*

1. Halesus digitatus.

Ochraceo-fuscus; antennæ fuscæ; alæ anticæ pallidæ, venis albis fusco marginatis, areolis granulatis, posticis linea longitudinali fusca. Long. 7—9; alar. 18—24 lin.

Phryganea digitata, *Schr. Ins. Austr.* 309, 616. *De Vill. Ent.* iii. 42, 52. *Oliv. Enc. Méth.* 556, 8. *Pictet, Rech. Phryg.* 138, 7, pl. 7, f. 2.
Phryganea interpunctata, *Zett. Ins. Lapp.* 1067, 29.
Limnophilus digitatus, *Burm. Handb. Ent.* ii. 2, 933, 14.
Halesus digitatus, *Steph. Ill. Brit. Ent. Mand.* vi. 208, 1.
Hallesus digitatus, *Kol. Gen. et Sp. Trich.* 69, 1.

a—d. England.

2. Halesus cingulatus.

Fulvo-ochraceus; alis anticis pallide ochraceis immaculatis; abdomine fulvescente segmentorum marginibus nigris. Long. 8½; alar. 18 lin.

Halesus cingulatus, *Steph. Ill. Brit. Ent. Mand.* vi. 209, 2.

England.

This and Limnephilus pilosus are perhaps the same species.

3. Halesus Vibex.

Ochraceus; alis anticis subangustatis pallide fusco-ochraceis, atomis numerosis pallidioribus, costa excepta, sparsis. Long. 7—9; alar. 14—22 lin.

Limnephilus Vibex, *Curt. Phil. Mag.* iv. 125.
Halesus Vibex, *Steph. Ill. Brit. Ent. Mand.* vi. 209, 3.

a. ——? From Mr. Children's collection.

4. Halesus latipennis.

Pallide ochraceus; alis anticis sublatis ochraceo-fuscis, vix pallide irroratis, venis fusco submarginatis. Long. 7—8½; alar. 18—20 lin.

Limnephilus latipennis, *Curt. Phil. Mag.* iv. 125.
Halesus latipennis, *Steph. Ill. Brit. Ent. Mand.* vi. 209, 4.

England.

5. Halesus hieroglyphicus.

Ochraceo-flavus; alis anticis, costa excepta, fuscescentibus, atomis pallidioribus confertim irroratis. Long. 8—10; alar. 17—25 lin.

Limnephilus hieroglyphicus, *Curt. Phil. Mag.* iv. 125.
Halesus hieroglyphicus, *Steph. Ill. Brit. Ent. Mand.* vi. 210, 5.

a—e. England.
f—h. ——— ? From Mr. Children's collection.

6. Halesus lateralis.

Fulvo-ochraceus; thoracis lateribus fuscescentibus; alis anticis pallide ochraceis, concinne irroratis, venis subfulvis. Long. 8; alar. 17—20 lin.

Halesus lateralis, *Steph. Ill. Brit. Ent. Mand.* vi. 210, 6.

England.

This and Limnephilus striatus are perhaps the same species.

7. Halesus stellatus.

Ochraceus; alis anticis fuscescentibus lineis maculisque pallidis. Long. 5½—6; alar. 16—18 lin.

Limnephilus stellatus, *Curt. Phil. Mag.* iv. 125.
Halesus stellatus, *Steph. Ill. Brit. Ent. Mand.* vi. 210, 7.

a—d. England.
e. ——— ?

This and Limnephilus pantherinus are perhaps the same species.

8. HALESUS NIGRICORNIS.

Ochraceus; capite thoraceque supra fuscis; antennæ piceo-nigræ; pedes testacei; alæ anticæ pallide ochraceæ, albido indistincte irroratæ, areolis rugulosis, areola 1a apicali ad basim rotundata. Long. 4; alar. 10—11 lin.

Phryganea nigricornis, *Pictet, Rech. Phryg.* 136, pl. 6, f. 4.
Anabolia (Drusus) nigricornis, *Steph. Ill. Brit. Ent. Mand.* vi. 232, 6.
Hallesus nigricornis, *Kol. Gen. et Sp. Trich.* 70, 2.

Europe.

9. HALESUS AURICOLLIS.

Pedes testacei. Alæ anticæ bicolores, areolis rugulosis, areola 1a apicali ad basim acuta. Long. 5; alar. 12—14 lin.

Phryganea auricollis, *Pictet, Rech. Phryg.* 141, 10, pl. 8, f. 1.
Hallesus auricollis, *Kol. Gen. et. Sp. Trich.* 70, 3.

Europe.

10. HALESUS FLAVIPENNIS.

Rufescenti-ochraceus; pedes testacei; alæ anticæ subhyalinæ, unicolores, tomento subaurato ornatæ, areolis rugulosis. Long. 3; alar. 9½ lin.

Phryganea flavipennis, *Pictet, Rech. Phryg.* 155, 23, pl. 11, f. 8.
Anabolia (Drusus) flavipennis, *Steph. Ill. Brit. Ent. Mand.* vi. 231, 5.
Hallesus flavipennis, *Kol. Gen. et Sp. Trich.* 71, 5.

Europe.

11. HALESUS PŒCILUS.

Pedes fusci.

Hallesus pœcilus, *Kol. Gen. et Sp. Trich.* 71, 4.

Carinthia, Austria.

12. HALESUS TESTACEUS.

Rufescenti-ochraceus; alæ pallidores, anticæ atomis paucis pallidis; pedes ochracei. Long. 4—5; alar. 12—13 lin.

Phryganea testacea, *Mus. Lesk.* 51, 38. *Gmel. Ed. Syst. Nat.* 2637, 47. *Pictet, Rech. Phryg.* 155, 4, pl. 6, f. 3. *Zett. Ins. Lapp.* 1065, 23.

Phryganea brunnea, *Oliv. Enc. Méth.* 559, 28. *Mus. Lesk. Pars Ent.* 51, 37.
Limnephilus luridus, *Curt. Phil. Mag.* iv. 124.
Anabolia (Drusus) testacea, *Steph. Ill. Brit. Ent. Mand.* vi. 231, 3.
Europe.

13. Halesus annulatus.

Rufescenti-ochraceus; abdomen fuscescens, segmentorum marginibus ochraceis; alæ hyalinæ, flavescenti-ochraceæ, immaculatæ. Long. 3; alar. 11 lin.

Anabolia (Drusus) annulata, *Steph. Ill. Brit. Ent. Mand.* vi. 231, 4, pl. 34, f. 3.

England.

14. Halesus dubius.

Rufescenti-ochraceus; antennæ fusco annulatæ; alæ anticæ pubescentes, fusco-ochraceæ, punctis remotis pallidioribus. Long. 5½; alar. 12 lin.

Anabolia (Drusus) dubia, *Steph. Ill. Brit. Ent. Mand.* vi. 232, 7.
England.

15. Halesus guttifer.

Testaceus; alæ anticæ macula una nonnunquam obsoleta subfusca in areolis apicalibus, alteraque in cella discali areola thyridii et cella thyridii, guttaque nigra in areola apicali 3a; alæ posticæ albidæ.

Testaceous: antennæ ferruginous: fore-wings thickly and very minutely tuberculated, with two pale brown spots which are occasionally obsolete, one at the base of the apical areolets, the other occupying the base of the discal cell, of the areolet of the thyridium, and of the cell of the thyridium; a black dot near the base of the third apical areolet: hind-wings whitish. Length of the body 5—7 lines; of the wings 16—20 lines.

a—d. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.
e, f. Georgia. From Mr. Abbot's collection.

16. Halesus punctatissimus.

Testaceus; alæ anticæ albido indistincte et confertissime irroratæ; alæ posticæ albidæ.

Testaceous, rather broad: antennæ stout: fore-wings broad, minutely tuberculate, very thickly covered with whitish dots; fore-border mostly whitish; a large irregular whitish spot on the discal areolet, on the areolet of the thyridium, and on the cell of the thyridium: hind-wings whitish. Length of the body 3½ lines; of the wings 12 lines.

a, *b*. Nova Scotia. From Lieut. Redman's collection.

Genus 5. LIMNEPHILUS.

Corpus subcompressum, non depressum. Palpi maxillares articulo ultimo elongato, filiformi. Tibiæ setigeræ; intermediæ tricalcaratæ. Alæ anticæ angustæ, pilosæ, vix setigeræ, margine postico oblique truncato.

Limnephilus, *Leach; Steph. Ill. Brit. Ent. Mand.* vi. 211.
Limnophilus, *Burm.*

Group 1. GLYPHOTÆLIUS.

Alæ anticæ apice obliquè truncatæ; margo apicalis excisus, bis sinuatus, sinu anteriore minore, inter sinus substantia excedente. Tibiæ intermediæ tricalcaratæ, posticæ quadricalcaratæ.

Glyphotælius, *Steph. Ill. Brit. Ent. Mand.* vi. 211.
Glyphidotaulius, *Kolenati, Gen. et Sp. Trich. Pars* 1a (1848), 36, pl. 1, f. 1, A, B.
Phryganea p., *Deg., Oliv., Pictet.*
Limnophilus p., *Leach, Burm.*

1. Limnephilus umbraculum.

Alæ unicolores.

Glyphidotaulius umbraculum, *Kolenati, Gen. et Sp. Trich. Pars* 1a, 37, 1.

Germany. •

2. Limnephilus pellucidulus.

Ochraceus; alæ anticæ bicolores, emarginatæ, fusco irroratæ, maculis duabus hyalinis; alæ posticæ hyalinæ, apice ochraceo in maribus fusco nebuloso. Long. 6—8; alar. 15—18 lin.

Phryganea pellucida, *Oliv. Enc. Méth.* 541, 12. *Pictet, Rech. Phryg.* 146, 17, pl. 8, f. 4.
Phryganea, &c., *Deg. Ins.* ii. 526, 1, pl. 12, f. 19.
Limnophilus pellucidus, *Burm. Handb. Ent.* ii. 932, 8.
Glyphotælius pellucidus, *Steph. Westw. Synops.* 49.
Glyphidotaulius pellucidus, *Kolen. Gen. et Sp. Trich.* 37, 2.
Mas.—Limnephilus basalis, *Curt. Phil. Mag.* iv. 122.
Fœm.—Limnephilus emarginatus, *Curt. Phil. Mag.* iv. 122.
Limnephilus (Glyphotælius) pellucidulus, *Steph. Ill. Brit. Ent. Mand.* vi. 211, 1.
Var. ornatus, *Steph. Ill. Brit. Ent. Mand.* vi 212.
Var. diaphanus, *Steph. Ill. Brit. Ent. Mand.* vi. 212.
Var. cognatus, *Steph. Ill. Brit. Mand.* vi. 212.
Limnephila pellucida, *Ramb. Hist. Nat. Ins. Neur.* 485, 24.

a—d. England.
e. ———? From Mr. Children's collection.

3. Limnephilus lævis.

Ferrugineus; antennis palpis pectorisque disco nigris; abdomen nigro varium; alæ anticæ luridæ, areola interclavali nigro guttata.

Ferruginous, clothed with pale hairs: antennæ, palpi and disk of the breast black: abdomen, coxæ and thighs marked with black: fore-wings lurid, minutely tuberculated, with a row of black dots along the interclaval areolet; veins testaceous: hind-wings slightly gray. Length of the body 9 lines; of the wings 26 lines.

a. ———? From Mr. Children's collection.

Group 2. GRAMMOTAULIUS.

Alarum posticarum sector apicalis 4a in sexu utroque linea fusca, infra et supra glabra; alarum anticarum margo apicalis integer, nimis oblique truncatus, alarum omnium apex acuminatus. Tibiæ intermediæ tricalcaratæ; posticæ quadricalcaratæ.

Grammotaulius, *Kolenati*, *Gen. et Sp. Trich. Pars* 1a, 38, pl. 1, f. 2.
Phryganea p., *Fabr.*, *Schr.*, *DeVill.*, *Zett.*
Limnephilus p., *Leach*, *Steph.*, *Westw.*
Limnophilus p., *Burm.*
Limnephila p., *Ramb.*

4. Limnephilus lineola.

Pallide ochraceus; alæ anticæ pallidæ, fusco-irroratæ; posticæ immaculatæ lineola apicis fusca. Long. 6—7; alar. 14—22 lin.

Phryganea lineola, *Schr. Ins. Austr.* 307, 613, var. *a*. *DeVill. Lin. Ent.* iii. 41. *Zett. Ins. Lapp.* 1063, 10.
Limnephilus strigosus, *Curt. Phil. Mag.* iv. 122.
Limnophilus gracilis, *Burm. Handb. Ent.* ii. 2, 932, 12.
Limnephilus lineola, *Steph. Ill. Brit. Ent. Mand.* vi. 213, 2.
Grammotaulius lineola, *Kol. Gen. et Sp. Trich.* 39, 1.
Limnephila lineola, *Ramb. Hist. Nat. Ins. Neur.* 474, 1.

a—e. England.
f, *g*. ——— ? From Mr. Children's collection.

5. Limnephilus atomarius.

Fusco-cinereus; alæ anticæ fusco-cinerascentes, punctis nigris confertissimis sparsis; pedes ochracei. Long. 7; alar. 22 lin.

Phryganea atomaria, *Fabr. Ent. Syst.* ii. 78, 15.
Phryganea lineola, *Schr. Ins. Austr.* 308, 613. Var. *b*.
Phryganea irrorata, *Zett. Ins. Lapp.* 1063, 11.
Limnephilus atomarius, *Steph. Ill. Brit. Ent. Mand.* vi. 206, 3.
Limnophilus atomarius, *Burm. Handb. Ent.* ii. 932, 11.
Grammotaulius atomarius, *Kol. Gen. et Sp. Trich. Pars* 1a, 39, 2.

Europe.

6. Limnephilus interrogationis.

Alæ anticæ vittatæ.

Phryganea interrogationis, *Zett. Ins. Lapp.* 1063, 12.
Grammotaulius interrogationis, *Kol. Gen. et Sp. Trich.* 40, 3.

Lapland, Greenland.

Group 3. CHÆTOTAULIUS.

Alarum sector primus apicalis in mare lineola brevi fusca, quæ supra glabra, infra hirta, e pilis accumulatis suberectis rigidis est composita, in fœmina ibidem vena latiori, alarum anticarum margo suturalis late sinuatus, apice subacutus, margo apicalis integer, subcrenulatus. Tibiæ intermediæ tricalcaratæ; posticæ quadricalcaratæ.

Chætotaulius, *Kolen. Gen. et Sp. Trich.* 41, 3, pl. 1, f. 3.
Phryganea p., *Linn.*
Limnephilus p., *Leach, Steph., Curt., Westw., Pictet.*
Limnophilus p., *Burm.*

7. LIMNEPHILUS VITRATUS.

Ochraceus; alæ anticæ flavescente-ochraceæ, fusco variegatæ, macula discali rhombea utrinque fusco marginata, lunulaque apicis pallidis. Long. 3½—5; alar. 13—14½ lin.

Phryganea vitrata, *Deg. Ins.* ii. pl. 12, f. 19. *Zett. Ins. Lapp.* 1064, 13.
Limnophilus lunaris, *Burm. Handb. Ent.* ii. 931, 5.
Phryganea lunaris, *Pictet, Rech. Phryg.* 152, 21, pl. 9, f. 3.
Chætotaulius vitratus, *Kol. Gen. et Sp. Trich.* 42, 1.
Limnephila lunaris, *Ramb. Hist. Nat. Ins. Neur.* 481, 18.
Limnephilus nebulosus, *Curt. Phil. Mag.* iv. 123. *Steph. Ill. Brit. Ent. Mand.* vi. 215, 10.
Var. Limnephilus apicalis, *Curt. Phil. Mag.* iv. 123.

a—i. England.
j. England. Presented by J. C. Dale, Esq.
k. ——? From Mr. Children's collection.

8. LIMNEPHILUS BOREALIS.

Alæ anticæ macula apicali marginali quadrangulari.

Phryganea borealis, *Zett. Ins. Lapp.* 1062, 7.
Chætotaulius borealis, *Kol. Gen. et Sp. Trich.* 42, 2.

Lapland.

9. Limnephilus nobilis.

Caput albo-pilosum. Alæ anticæ macula discali rhombea; venæ bicolores.

Chætotaulius nobilis, *Kolen. Gen. et Sp. Trich.* 43, 3.

Livorno.

10. Limnephilus angustatus.

Caput fusco-pilosum. Alæ anticæ macula discali rhombea; venæ bicolores.

Chætotaulius angustatus, *Kol. Gen. et Sp. Trich.* 43, 4.

Styria.

11. Limnephilus decipiens.

Alæ anticæ macula discali rhombea absque fuscedine, maculaque stigmaticali; venæ unicolores.

Chætotaulius decipiens, *Kol. Gen. et Sp. Trich.* 44, 5.

Europe.

12. Limnephilus flavicornis.

Ochraceus; antennæ pedesque flavescentes; alæ anticæ hyalinæ cinereo variegatæ, venis margineque interiore fusco punctatis, macula discali rhombea absque fuscedine, macula stigmaticali nulla, venis unicoloribus. Long. 5—6; alar. 14—16 lin.

Phryganea flavicornis, *Fabr. Ent. Syst.* ii. 77, 12. *Oliv. Enc. Méth.* 541, 13. *Schr. Faun. Boic.* ii. 184, 1917. *Latr. Hist. Nat. Ins.* xiii. 88, 8. *Pictet, Rech. Phryg.* 151, 20, pl. 9, f. 2.

Limnephilus flavicornis, *Steph. Ill. Brit. Ent. Mand.* vi. 213, 3.

Limnophilus flavicornis, *Billb. En.* 94. *Burm. Handb. Ent.* ii. 2, 932, 10.

Phryganea atomaria, *Zett. Ins. Lapp.* 1063, 8.

Chætotaulius flavicornis, *Kol. Gen. et Sp. Trich.* 44, 6.

Limnephila flavicornis, *Ramb. Hist. Nat. Ins. Neur.* 484, 23.

Var.? Limnephilus discoidalis, *Curt. Phil. Mag.* iv. 123. *Steph. Ill. Brit. Ent. Mand.* vi. 214, 5. *Sordide ochraceus; alæ anticæ fuscescentes basi pallidiores, macula discoidali et altera postice semihyalinæ; alæ posticæ apice fusco.* Long. 7; alar. 15 lin.

a—f. England.
g, h. Polish Ukraine. Presented by Dr. Dowler.
i. Italy. From Dr. Leach's collection.
j. South France. Presented by F. Walker, Esq.
k—o. ———? From Mr. Children's collection.

13. Limnephilus rhombicus.

Ochraceus; alæ anticæ cinereo-flavescentes, macula magna rhomboidali pallida utrinque fusco marginata. Long. 6—8; alar. 12—16 lin.

Phryganea rhombica, *Linn. Syst. Nat. ed.* 12, ii. 909, 8. *Faun. Suec.* 1486. *Réaum. Ins.* iii. pl. 11, f. 5. *Roesel, Ins. Bel.* ii. *Aquat.* 2, pl. 16. *Schæff. Icon.* pl. 90, f. 5, 6. *Elem. Ent.* pl. 100. *Geoff. Ins.* ii. 246, 2. *Schr. Ins. Austr.* 307, 612. *Faun. Boic.* ii. 180, 1905. *Gmel. ed. Syst. Nat.* i. 5, 2633, 8. *Ahrens, Faun. ed. Germar*, ix. 13. *Fourcr. Ent. Par.* ii. 354, 2. *De Vill. Ent.* iii. 29, 12. *Rossi, Faun. Etrusc.* 680. *Oliv. Enc. Méth.* 511, 14. *Fabr. Sp. Ins.* i. 389, 10. *Mant. Ins.* i. 245, 10. *Ent. Syst.* ii. 77, 13. *Wilh. Recréat.* iii. 23, 30. *Latr. Hist. Nat. Ins.* xiii. 88, 9. *Don. Brit. Ins.* vii. pl. 220. *Stew. Elem.* ii. 214. *Turt. ed. Syst. Nat.* xiii. 396. *Shaw, Gen. Zool.* vi. 255, pl. 82, f. med. *Pictet, Rech. Phryg.* 148, 19, pl. 9, f. 1. *Zett. Ins. Lapp.* 1062, 6.
Limnophilus rhombicus, *Billberg, Enum.* 94. *Burm. Handb. Ent.* ii. 2, 932, 9. *Pictet, Rech. Phryg.* 148, 19, pl. 9, f. 1.
Phryganea grandis, *Sulzer, Ins.* pl. 17, f. 104.
Phryganea rhomboidica, *Berk. Syn.* i. 151.
Chætotaulius rhombicus, *Kol. Gen. et Sp. Trich.* 45, 7.
Limnephila rhombica, *Ramb. Hist. Nat. Ins. Neur.* 481, 17.

a—d. England.
e, f. ———? From Mr. Children's collection.
g. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

14. Limnephilus elegans.

Fusco-ochraceus; alæ anticæ pallide fuscescentes, vittis aliquot albidis subradiatim dispositis. Long. 6—7; alar. 14—16 lin.

Limnephilus elegans, *Curt. Phil. Mag.* iv. 123. *Brit. Ent.* pl. 488. *Steph. Ill. Brit. Ent. Mand.* vi. 215, 9.

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Chætotaulius signifer, *Kol. Gen. et Sp. Trich.* 46, 8.
Phryganea signifer, *Zett. Ins. Lapp.* 1063, 9.
Europe.

15. LIMNEPHILUS STRIOLA.

Alæ anticæ unicolores.

Chætotaulius striola, *Kol. Gen. et Sp. Trich.* 47, 9.
Germany.

Group 4. COLPOTAULIUS.

Antennæ corpore longiores. Alæ anticæ apice oblique truncatæ, areola basali una, margine apicali integro, fimbriis longioribus. Alæ posticæ non vittatæ, margine postico fimbriis longioribus, inter cubitum et costulam trochlearem profunde exciso, sectore apicali primo in utroque sexu absque juba. Tibiæ intermediæ tricalcaratæ; posticæ quadricalcaratæ.

Colpotaulius, *Kolenati, Gen. et Sp. Trich.* 47, 4, pl. 1, f. 4.

16. LIMNEPHILUS EXCISUS.

Corpus rufum. Alæ anticæ sectoribus apicalibus variegatis.

Colpotaulius excisus, *Kol. Gen. et Sp. Trich.* 48, 1.
Limnephilus incisus? *Steph. Ill. Brit. Ent. Mand.* vi. 228, 48.
a. England.

17. LIMNEPHILUS VULSELLA.

Corpus fuscum. Alæ anticæ sectoribus apicalibus unicoloribus.

Colpotaulius vulsella, *Kol. Gen. et Sp. Trich.* 48, 2.
a, b. England.

18. LIMNEPHILUS INDICANS.

Ferrugineus; palpi et pedes testacei; alæ anticæ testaceæ, albido marginatæ, vitta discali brevi alba apud medium contracta apice quinque-digitata.

Ferruginous: antennæ paler: palpi and legs testaceous: forewings testaceous, deeply and irregularly whitish round the border; disk with a short white stripe which is slender in the middle and

towards the tip forms five rays, the middle one longest: hind-wings whitish. Length of the body 5 lines; of the wings 18 lines.

a, b. Georgia. From Mr. Abbot's collection.

19. Limnephilus designatus.

Testaceus; thorax fusco bivittatus; abdomen fuscum; alæ anticæ vitta sericea alba interrupta et apicem versus dilatata.

Testaceous, clothed with testaceous hairs: thorax with two brown stripes: abdomen brown: fore-wings with a silky white discal stripe which is interrupted beyond the middle, dilated and irregular towards the tip: hind-wings whitish. Length of the body 7 lines; of the wings 18 lines.

a, b. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.
c. North America. Presented by the Entomological Club.
d, e. Arctic America. District watered by the Mackenzie and Slave Rivers. Presented by Sir John Richardson.
f. Great Bear Lake. Presented by Sir John Richardson.
g. Nova Scotia. From Lieut. Redman's collection.

Group 5. GONIOTAULIUS.

Alæ anticæ apice oblique truncatæ, margine apicali integro, oblique cum suturali in angulum connivente, areola apicali prima quintæ inæquali. Alæ posticæ margine non exciso, integro, areola apicali prima quintæ quoque inæquali. Tibiæ intermediæ tricalcaratæ; posticæ quadricalcaratæ.

Goniotaulius, *Kolenati, Gen. et Sp. Trich.* 48, 5.
Phryganea p., *Linn., Deg., Fabr., Billbg., Oliv., Schr., Pictet, Zett.*
Limnephilus p., *Leach, Steph., Curt., Westw.*
Limnophilus p., *Burm.*

20. Limnephilus vittatus.

Subtestaceus; alæ anticæ ochraceo-flavæ, vitta longitudinali interrupta fusca. Long. 3½; alar. 9 lin.

Phryganea vittata, *Fabr. Ent. Syst. Suppl.* 201, 16, 17. *Pictet, Rech. Phryg.* 157, 27, pl. 10, f. 4. *Zett. Ins. Lapp.* 1064, 16.
Limnephilus vittatus, *Steph. Ill. Brit. Ent. Mand.* vi. 225, 39.
Limnophilus vittatus, *Burm. Handb. Ent.* ii. 2, 931, 3.

Goniotaulius vittatus, *Kol. Gen. et Sp. Trich.* 49, 1.
Limnephila vittata, *Ramb. Hist. Nat. Ins. Neur.* 485, 26.

Europe.

Var.? *Fuscus, subtus ochraceus; alæ anticæ pallide fusco-flavidæ, flavo irroratæ, stigmate obscuro.* Long. 4—4½; alar. 10½—11 lin.

Limnephilus ochraceus, *Curt. Phil. Mag.* iv. 124. *Steph. Ill. Brit. Ent. Mand.* vi. 223, 34.

a. England.

Var.? *Fuscus, subtus ochraceus; alæ anticæ ferrugineo-ochraceæ fusco irroratæ, angulo postico fusco ochraceo irrorato.* Long. 4—5½; alar. 10—11½ lin.

Limnephilus consobrinus, *Curt. Phil. Mag.* iv. 124. *Steph. Ill. Brit. Ent. Mand.* vi. 224, 35.

a—g. England.

21. Limnephilus nigrovittatus.

Ochraceus; antennæ pedesque pallidiores; alæ anticæ ochraceo-flavæ, linea abbreviatu longitudinali media nigra, margine postico fusco irrorato, stigmate fusco. Long. 4½; alar. 11 lin.

Var.? Phryganea elegans, *Pictet, Rech. Phryg.* 157, 26, pl. 10, f. 3.
Var.? Limnophilus elegans, *Burm. Handb. Ent.* ii. 931, 2.
Var.? Limnephila elegans, *Ramb. Hist. Nat. Ins. Neur.* 486, 27.
Limnephilus nigrovittatus, *Steph. Ill. Brit. Ent. Mand.* vi. 225, 40.

Europe.

22. Limnephilus flavus.

Ochraceus; thoracis dorsum et abdomen fusca; alæ anticæ flavæ, vittis duabus indistinctis longitudinalibus fuscis. Long. 5; alar. 10—11 lin.

Phryganea flava, *Linn. Syst. Nat. ed.* 12, 910, 21. *Faun. Suec.* 1502. *Gmel. ed. Syst. Nat.* i. 5, 2636, 21. *De Vill. Ent.* iii. 31, 25. *Oliv. Enc. Méth.* 548, 39. *Latr. Hist. Nat. Ins.* xiii. 92, 28. *Pictet, Rech. Phryg.* 156, 25, pl. 10, f. 2.
Limnephilus terminalis? *Curt. Phil. Mag.* iv. 124.
Limnephilus flavus, *Steph. Ill. Brit. Ent. Mand.* vi. 226, 42.
Limnophilus flavus, *Burm. Handb. Ent.* ii. 2, 931, 4.
Goniotaulius flavus, *Kol. Gen. et Sp. Trich.* 50, 2.

Europe.

23. Limnephilus fuscinervis.

Alæ anticæ vittatæ; venæ omnes rufo-fuscæ. Femora testacea.

Phryganea fuscinervis, *Zett. Ins. Lapp.* 1065, 19.
Goniotaulius fuscinervis, *Kol. Gen. et Sp. Trich.* 51, 3.

Lapland; Germany.

24. Limnephilus femoratus.

Alæ anticæ vittatæ. Femora picea.

Phryganea femorata, *Zett. Ins. Lapp.* 1065, 17.
Goniotaulius femoratus, *Kol. Gen. et Sp. Trich.* 51, 4.

Lapland.

25. Limnephilus anastomosis.

Alæ anticæ vittatæ; venæ in anastomosi fuscæ. Femora testacea.

Goniotaulius anastomosis, *Kol. Gen. et Sp. Trich.* 52, 5.
Phryganea elegans? *Pictet, Rech. Phryg.* 157, 26, pl. 10, f. 3.

Hungary.

26. Limnephilus fenestratus.

Alæ anticæ albo pustulatæ, macula stigmaticali.

Phryganea fenestrata, *Zett. Ins. Lapp.* 1064, 15.
Goniotaulius fenestratus, *Kol. Gen. et Sp. Trich.* 52, 6.

Lapland.

27. Limnephilus trimaculatus.

Alæ anticæ maculis tribus fuscis, maculaque stigmaticali.

Phryganea trimaculata, *Zett. Ins. Lapp.* 1065, 18.
Goniotaulius trimaculatus, *Kol. Gen. et Sp. Trich.* 53, 7.

Scandinavia.

28. Limnephilus griseus.

Fusco-cinereus; alæ anticæ fuscescentes, flavido irroratæ, macula rhombea albida, stigmate nigro-fusco. Long. 5—6½; alar. 12—15½ lin.

Phryganea grisea, *Linn. Syst. Nat. ed.* 12, ii. 909, 6. *Faun. Suec.* 1484. *Deg. Ins.* 399, 3, pl. 13, f. 18—21; 539—543. *Fabr. Sp. Ins.* i. 389, 11. *Mant. Ins.* i. 245, 13. *Ent. Syst.* ii. 78, 14. *Gmel. ed. Syst. Nat.* i. 5, 2632, 6. *Cederhielm, Faun. Ingr. Prodr.* 139, 422. *Mus. Lesk.* 51, 35. *Rossi, Mant. Ins.* 104, 229. *Billb. Ent.* i. 94. *De Vill. Linn. Ins.* iii. 28, 10. *Oliv. Enc. Méth.* 541, 15. *Latr. Hist. Nat. Ins.* xiii. 88, 10. *Schr. Faun. Boic.* ii. 181, 1907. *Dahlb. Skand. Ins.* 239, 156. *Pictet, Rech. Phryg.* 147, 18, pl. 11, f. 7. *Zett. Ins. Lapp.* 1062, 5.

Limnephilus griseus, *Leach. Steph. Ill. Brit. Ent. Mand.* vi. 217, 13. *Curt. Brit. Ent.* 488. *Westw. Synops.* 49.

Limnophilus griseus, *Burm. Handb. Ent.* ii. 2, 932, 7.

Goniotaulius griseus (*vars.* senex, Selene, tæniatus), *Kol. Gen. et Sp. Trich.* 43.

a—i. England.

j. ——— ? From Mr. Children's collection.

29. Limnephilus stigmaticus.

Alæ anticæ fusco irroratæ, macula stigmaticali.

Goniotaulius stigmaticus, *Kol. Gen. et Sp. Trich.* 55, 6.

Europe.

Var. ? *Fuscus, subtus ochraceus; alæ anticæ albido-fuscæ, pallide irroratæ, lunula media maculaque bisinuata postice hyalinis plerisque fusco marginatis, venis longitudinalibus albo punctatis, stigmate piceo.* Long. 6—7; alar. 10—13½ lin.

Limnephilus bipunctatus, *Curt. Phil. Mag.* iv. 123. *Steph. Ill. Brit. Ent. Mand.* vi. 218, 18.

a—c. England.

Var ? *Pallide ochraceus; alæ pallidiores, immaculatæ, venis piceo irroratis, stigmate piceo.* Long. 5½—6; alar. 13—14 lin.

Limnephilus affinis, *Curt. Phil. Mag.* iv. 123. *Steph. Ill. Brit. Ent. Mand.* vi. 217, 15.

a—d. England.

e. ——— ? From Mr. Children's collection.

30. Limnephilus concentricus.

Alæ anticæ maculatæ, parastigmate nullo.

Phryganea concentrica, *Zett. Ins. Lapp.* 1067, 30.
Goniotaulius concentricus, *Kol. Gen. et Sp. Trich.* 55, 10.

North Europe.

31. Limnephilus tenebricus.

Fuscus; alæ anticæ saturate fuscæ plus minus ochraceo irroratæ, maculis duabus pallidis, stigmate piceo. Long. 4—5½; alar. 12—14. lin.

Limnephilus tenebricus, *Curt. Phil. Mag.* iv. 123. *Steph. Ill. Brit. Ent. Mand.* vi. 222, 29.

a—k. England.

32. Limnephilus sparsus.

Fuscus, subtus ochraceus; alæ anticæ fusco-ochraceæ, atomis pallidioribus, macula postica ochracea; pedes ochracei, tibiis anticis fusco annulatis. Long. 4—5½; alar. 11—13 lin.

Limnephilus flavus var.?
Limnephilus sparsus, *Curt. Phil. Mag.* iv. 123. *Steph. Ill. Brit. Ent. Mand.* vi. 223, 31.

a—c. England.

33. Limnephilus Auricula.

Ochraceus; alæ anticæ lucidæ, saturate ochraceæ, macula media alteraque auriculæformi postice hyalinis, stigmate obscure fusco. Long. 4—5; alar. 10—11. lin.

Limnephilus Auricula, *Curt. Phil. Mag.* iv. 124. *Steph. Ill. Brit. Ent. Mand.* vi. 220, 22.

a—h. England.

34. Limnephilus combinatus.

Ferrugineus, abdomine pedibusque testaceis; alæ anticæ fuscæ, costa maculaque magna subrhomboidali discali guttisque subtestaceis, apicem versus subtestaceæ fusco conspersæ, alæ posticæ hyalinæ.

Ferruginous, clothed with pale hairs: abdomen and legs testaceous: fore-wings brown, slightly testaceous along the foreborder and with a large nearly rhomboidal spot of that colour in the disk; some pale testaceous dots in the disk and more towards the tips where the brown hue least prevails: hind wings colourless. Length of the body 5 lines; of the wings 16 lines.

a. Newfoundland. Presented by W. C. St. John, Esq.

35. Limnephilus ochraceus.

Ochraceus; alæ anticæ angustæ fusco-ochraceæ, macula centrali seriisque duabus punctorum posticis hyalinis, stigmate fusco-ochraceo. Long. 4—5; alar. 10—12. lin.

Limnephilus obscurus, *Curt. Phil. Mag.* iv. 124. *Steph. Ill. Brit. Ent. Mand.* vi. 220, 24.

England.

36. Limnephilus fenestralis.

Ochraceus, supra fuscus; alæ anticæ albidæ, basi excepto irregulariter fusco irroratæ et maculatæ, lineola discali maculisque postice subhyalinis, stigmate piceo. Long. 5—6½; alar. 10—15 lin.

Limnephilus fenestralis, *Curt. Phil. Mag.* iv. 123. *Steph. Ill. Brit. Ent. Mand.* vi. 218, 17.

a—f. ——— ? From Mr. Children's collection.

37. Limnephilus stipatus.

Nigro-cinereus, subtus testaceus; antennæ fulvæ; pedes testacei; alæ anticæ fuscæ, albido guttatæ et maculatæ.

Allied to *L. variegatus*. Black, tinged with gray, clothed with pale hairs and with longer black hairs, testaceous beneath: antennæ tawny; 1st joint mostly black or brown: legs testaceous: fore-wings brown, with numerous whitish dots and spots, many of these confluent, and especially so on the disk and on the fore border: hind-wings whitish. Length of the body 4 lines; of the wings 12 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

b. Arctic America. District watered by the Mackenzie and Slave Rivers. Presented by Sir J. Richardson.

38. Limnephilus marmoratus.

Ochraceus; alæ pallidiores, anticæ fusco nebulosæ, maculis duabus subhyalinis, venis transversis fuscis. Long. 6—7; alar. 12—15 lin.

Limnephilus marmoratus, *Curt. Phil. Mag.* iv. 123. *Steph. Ill. Brit. Ent. Mand.* vi. 214, 7.

England.

39. Limnephilus divergens.

Testaceus; antennæ ferrugineæ; alæ anticæ confertissime tuberculatæ, apice subfuscæ; alæ posticæ albidæ.

Testaceous, clothed with pale hairs: antennæ ferruginous: fore-wings very thickly covered with ferruginous tubercles, very pale brown at the tips, with a large tubercle at the base of the third apical areolet: hind-wings whitish. Length of the body 5 lines; of the wings 16 lines.

a, b. North America. Presented by the Entomological Club.

40. Limnephilus bimaculatus.

Testaceus; antennæ ferrugineæ; thorax piceo bivittatus; alæ anticæ obsolete irroratæ; alæ postice albidæ.

Limnephilus bimaculatus, *Barnston, MSS.*

Testaceous, clothed with pale hairs and black bristles: antennæ ferruginous: thorax with a broad pitchy stripe on each side: fore-wings with very indistinct pale dots, which are most prevalent towards the base: hind-wings whitish. Length of the body 5 lines; of the wings 16 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

41 Limnephilus intercisus.

Ferrugineus, albo-tomentosus; caput supra, thoracis vittis duabus, et abdomen fusca; alæ anticæ fuscæ albo-tomentosæ, maculis nonnullis albis discalibus et apicalibus ornatæ.

Ferruginous, covered with white down: disk of the head, two stripes of the thorax and abdomen brown: legs testaceous: fore-wings brown, with white down, here and there with some darker

marks, speckled with white, with three white spots in the disk and with a smaller one on the tip of each of the apical and subapical areolets; two of the discal spots are on the cell of the thyridium and one on the 4th and 5th apical areolets; tips slightly notched: hind-wings slightly gray. Length of the body 4—4½ lines; of the wings 15—16 lines.

Var. β. *Niger, antennis pedibusque ferrugineis; thorax cano vittatus; alæ anticæ fuscæ, albido irroratæ, maculis fuscis obscurioribus albidisque discalibus et apicalibus; alæ posticæ subcinereæ.*

Black, clothed with pale hairs, tinged with gray: antennæ, legs, and tip of the abdomen ferruginous: thorax with a very broad hoary stripe: fore-wings brown, very minutely tuberculated, covered with white, sprinkled with whitish dots, adorned with some oblong darker brown and whitish spots in the disk, and with small white spots along the tips: hind-wings slightly gray. Length of the body 5 lines; of the wings 15 lines.

a—e. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

42. Limnephilus despectus.

Cinereo-ferrugineus; antennæ subfuscæ, articulis basi abdomine pedibusque testaceis; thorax albo bivittatus; alæ anticæ fuscæ albido irroratæ et bimaculatæ, costa discoque apicem versus albidis.

Dark ferruginous, tinged with gray, clothed with pale hairs and beset with longer black bristles: antennæ pale brown; joints testaceous at the base: maxillary palpi brown: labial palpi, abdomen and legs testaceous: thorax with two white stripes: fore-wings brown, with whitish dots, and a whitish spot on the cell of the thyridium and on the interclaval areolet, and another on the 1st subapical areolet; the whitish colour also prevails along the fore border and on the disk towards the tip: hind wings whitish. Length of the body 3½ lines; of the wings 10 lines.

a—c. Nova Scotia. From Lieut. Redman's collection.

This may be L. nebulosus, *Kirby*, but does not well agree with the description.

43. Limnephilus multifarius.

Nigro-cinereus; antennæ fuscæ, annulatæ; pedes testacei; alæ anticæ fuscæ, albido irroratæ et bimaculatæ.

Phryganea variegata, *Barnston's MSS.*

Black, tinged with gray, clothed with pale hairs and with longer black hairs: antennæ brown, testaceous at the base of each joint: legs testaceous: fore-wings brown, with numerous whitish dots, some of which are large and irregular; a whitish spot on the areolet and on the cell of the thyridium, and another on the base of the apical areolets; hind border fringed with black hairs: hind-wings grayish. Length of the body 3¾ lines; of the wings 10 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

Much resembles L. fenestralis.

44. Limnephilus præteritus.

Niger; antennis tibiis tarsisque ferrugineis; alæ anticæ fuscæ, albido irroratæ et maculatæ, venis nigris; alæ posticæ subhyalinæ.

Black, clothed with pale hairs: head clothed in front with black hairs: antennæ ferruginous; the 1st joint black: legs ferruginous; thighs black: fore-wings brown, with numerous minute whitish dots and with some oblong whitish spots in the disk and along the border at the tips: hind-wings almost colourless, with a brown spot on the hind border towards the tip: veins black. Length of the body 3½ lines; of the wings 11 lines.

a. Arctic Regions. District watered by the Mackenzie and Slave Rivers. Presented by Sir John Richardson.

45. Limnephilus partitus.

Nigro-cinereus; antennis, pedibus, abdominisque apice ferrugineis; alæ hyalinæ, anticæ vitta interrupta maculisque duabus fuscis.

Black, with a gray covering, clothed with pale hairs: antennæ ferruginous; 1st joint black: legs ferruginous: wings colourless; fore-wings with an irregular brown stripe near the hind border, this stripe is obliquely interrupted before the middle, a little beyond which it contains two colourless dots; a brown spot on the parastigma, and another on the 2nd, 3rd and 4th apical areolets; veins brown. Length of the body 3½ lines; of the wings 11 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

46. Limnephilus perforatus.

Ferrugineus; caput, thorax vittis duabus et scutellum nigra; alæ anticæ fuscæ, albido irroratæ et maculatæ.

Ferruginous, clothed with black hairs: head above, sides of the thorax and scutellum black: legs testaceous: fore-wings brown, with numerous whitish dots; fore border mostly whitish; a rather large whitish spot on the areolet and on the cell of the thyridium, and another occupying the base of the apical areolets: hind-wings slightly gray. Length of the body 3¼ lines; of the wings 12 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

b. Arctic America. District watered by the Mackenzie and Slave Rivers. Presented by Sir John Richardson.

47. Limnephilus oonsocius.

Ferrugineus; thorax nigro vittatus; abdomen supra pigricans; pedes testacei; alæ anticæ testaceæ, albido confertissime irroratæ; alæ posticæ subhyalinæ.

Ferruginous, clothed with pale hairs: antennæ black at the base: thorax with a broad black stripe: abdomen blackish above: legs testaceous: fore-wings testaceous, with very numerous whitish dots, many of which are confluent; veins brown: hind-wings almost colourless. Length of the body 4 lines; of the wings 12 lines.

a. North America. Presented by the Entomological Club.

48. Limnephilus submonilifer.

Niger; antennæ articulis basi testaceis; abdomen subtus ferrugineum; pedes testacei; alæ anticæ fuscæ, macula discali albida guttisque fere obsoletis hyalinis, lineiisque tribus nigris albido-guttatis; alæ posticæ subcinereæ.

Black, clothed with pale hairs, beset with black bristles: joints of the antennæ testaceous at the base: abdomen ferruginous beneath: legs testaceous: fore-wings brown, with a whitish spot on the disk, and with almost obsolete colourless dots towards the tips; three pitchy stripes on each wing, one near the fore border, the other two near the hind border; veins piceous: hind-wigs very slightly gray. Length of the body 5 lines; of the wings 12 lines.

a. North America. Presented by the Entomological Club.

49. Limnephilus extractus.

Obscure testaceus ; palpis pedibusque pallidioribus ; thorax fusco bivittatus ; abdomen supra fuscum ; alæ sordide albidæ.

Dark testaceous, clothed with pale hairs: antennæ brown towards the tips: palpi and legs pale testaceous: thorax with a short broad brown stripe on each side: abdomen brown above: wings whitish ; fore-wings with a slight testaceous tinge along the hind border ; veins pale testaceous. Length of the body 3¼ lines ; of the wings 11 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

50. Limnephilus difficilis.

Testaceus ; antennæ fuscæ, articulis 1o ad et 2o omnino sequentibusque basi testaceis ; alæ anticæ subtestaceæ, hyalino indistincte et confertissime irroratæ ; alæ posticæ hyalinæ.

Testaceous, clothed with pale hairs: antennæ brown, paler towards the base ; first and second joints and each following joint at the base testaceous: fore-wings slightly testaceous, thickly covered with indistinct colourless dots, some of which are confluent ; veins ferruginous: hind-wings colourless. Length of the body 3½ lines ; of the wings 13 lines.

a. Nova Scotia. From Lieut. Redman's collection.

51. Limnephilus indivisus.

Pallide testaceus ; alæ anticæ subtestaceæ, macula stigmaticali subfusca ; alæ posticæ hyalinæ.

Pale testaceous: antennæ a little darker: fore-wings slightly testaceous, very minutely tuberculate, with a very pale brown stigma ; veins testaceous : hind-wings colourless. Length of the body 4 lines ; of the wings 13 lines.

a. Nova Scotia. From Lieut. Redman's collection.

52. Limnephilus subguttatus.

Testaceus ; alæ anticæ albido subguttatæ, apud stigma fuscum albido plagiatæ.

Phryganea guttata, *Barnston's MSS.*

Nearly allied to *L. affinis*. Testaceus, clothed with pale hairs: fore-wings with indistinct dots towards the base, along the hind-

border and about the tips; a brown spot on the fore border, and about it a large almost colourless space: hind-wings almost colourless. Length of the body 3½ lines; of the wings 11 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

53. Limnephilus plaga.

Testaceus; alæ anticæ macula magna postica media subquadrata fusca, apice fusco subreticulatæ.

Testaceous, clothed with pale hairs and with a few longer black hairs: fore-wings with pale shining testaceous down, adorned with a large dark brown subquadrate spot near the hind border, a little beyond the middle; tips indistinctly reticulated, with two patches of brown. Length of the body 3½ lines; of the wings 10 lines.

a. Nova Scotia. From Lieut. Redman's collection.

54. Limnephilus perpusillus.

Testaceus; antennæ fulvæ; alæ anticæ subtestaceæ, posticæ albidæ.

Testaceous, clothed with testaceous hairs: antennæ tawny: fore-wings slightly testaceous, very indistinctly mottled with darker colour from the disk to the hind border and about the tips; veins tawny: hind-wings whitish. Length of the body 2½ lines; of the wings 6 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

Group GONIOTAULIUS?

55. Limnephilus areolatus.

Cinereo-niger; tibiæ obscure ferrugineæ; alæ anticæ albidæ, areolis fusco fasciatis.

Black, with a slight gray tinge, clothed with black hairs: shanks dark ferruginous: wings whitish; veins black; most of the areolets of the fore-wings with brown bands which are broadest at the tips; borders fringed. Length of the body 2 lines; of the wings 6 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

Group 6. DESMOTAULIUS.

Alæ anticæ apice oblique rotundatæ, cubito pilis erectis, rigidis, areola apicali quinta basi angustiori et oblique triangulari. Alæ posticæ cubito cum sectoribus apicalibus per anastomosim brevem juncto. Tibiæ intermediæ tricalcaratæ; posticæ quadricalcaratæ.

Desmotaulius, *Kolenati, Gen. et Sp. Trich.* 56, 6, pl. 1, f. 6.
Limnophilus p., *Burm.*
Phryganea p., *Pictet.*

56. Limnephilus planifrons.

Frons plana. Alæ anticæ variegatæ, thyridio reniformi.

Desmotaulius planifrons, *Kol. Gen. et Sp. Trich.* 56, 1.

Greenland, Labrador.

57. Limnephilus Megerlei.

Frons plana. Alæ anticæ variegatæ, thyridio cum arculo fasciolæ albido.

Desmotaulius Megerlei, *Kol. Gen. et Sp. Trich.* 57, 2.

Europe.

58. Limnephilus hirsutus.

Frons convexa. Alæ anticæ variegatæ.

Phryganea hirsuta, *Pictet, Rech. Phryg.* 159, 29, pl. 11, f. 10.
Phryganea nigriceps? *Zett. Ins. Lapp.* 1065, 21.
Desmotaulius hirsutus, *Kol. Gen. et Sp. Trich.* 57, 3.

Germany.

59. Limnephilus fumigatus.

Fulvus; caput supra, antennæ et metathoracis dorsum nigra; alæ anticæ fuscæ, unicolores. Long. 6; alar. 16 lin.

Phryganea fumigata, *Germ. Ahrens, Faun. Fasc.* xiii. 21.
Phryganea rubricollis, *Pictet, Rech. Phryg.* 135, 3, pl. 1, f. 2.
Limnophilus rubricollis, *Burm. Handb. Ent.* ii. 2, 933, 13.
Desmotaulius fumigatus, *Kol. Gen. et Sp. Trich.* 58, 4.

Europe.

60. Limnephilus indistinctus.

Testaceus; caput et thorax ferruginea; alæ anticæ vitta lata postica strigaque apud areolas 4am et 5am subapicales subfuscis.

Testaceous: head and thorax ferruginous: antennæ pale ferruginous: fore-wings pale testaceous, with a broad very pale brown stripe along the hind-border, with a line of the same colour on the vein between the fourth and fifth subapical areolets, and with a white spot on the thyridium. Length of the body 4 lines; of the wings 13 lines.

♂. Newfoundland. Presented by W. C. St. John, Esq.

Group 7. PHACOPTERYX.

Frons inter antennas cornuta aut carinata. Alæ anticæ apice oblique rotundatæ, cubito pilis mollibus adpressis, areolis et areis alarum posticarum granulatis aut verrucosis, glabris, area costali interclavali et foro toto cubitali lævibus. Tibiæ intermediæ tricalcaratæ; posticæ quadricalcaratæ.

Phacopteryx, *Kolenati, Gen. et Sp. Trich.* 59, 7, pl. 1, f. 8.

61. Limnephilus granulatus.

Phacopteryx granulata, *Kol. Gen. et Sp. Trich.* 59, 7, pl. 1, f. 8.
North Europe.

Group 8. STATHMOPHORUS.

Alæ anticæ apice oblique rotundatæ, cubito pilis mollibus adpressis, areolis et areis lævibus et pubescentibus, areola apicali prima ad fundum longiori et acutiori. Theca supra et infra surculis gravata. Tibiæ intermediæ tricalcaratæ; posticæ quadricalcaratæ.

Stathmophorus, *Kolenati, Gen. et Sp. Trich.* 60, 8, pl. 1, f. 7.
Phryganea p., *Linn. &c.*
Limnephilus p., *Leach.*
Anabolia p., *Steph.*
Limnophilus p., *Burm.*

62. Limnephilus destitutus.

Antennæ fusco-piceæ. Alæ anticæ unicolores.

Stathmophorus destitutus, *Kol. Gen. et Sp. Trich.* 60, 1.
Phryganea picicornis? *Pictet, Rech. Phryg.* 155, 24, pl. 11, f. 9.
Germany.

63. Limnephilus Lapponicus.

Alæ anticæ bicolores.

Phryganea fusca, var. β. *Lapponica, Zett. Ins. Lapp.* 1067, 31.
Stathmophorus Lapponicus, *Kol. Gen. et Sp. Trich.* 62, 3.
Lapland.

Group 9. STENOPHYLAX.

Antennæ articulo basali capite breviori. Alæ anticæ apice parabolico aut orbiculari, radio thyrifero cum cubito antico in anastomosi. Tibiæ intermediæ tricalcaratæ; posticæ quadricalcaratæ. Larva omnino cylindrica, folliculum explens, branchiis brevibus simplicibus, pedibus brevibus æqualibus.

Stenophylax, *Kolenati, Gen. et Sp. Trich.* 62, 3, pl. 1, f. 9.
Phryganea p., *Linn. &c.*
Limnophilus p., *Burm.*
Halesus p., *Steph.; Westw.*

64. Limnephilus puberulus.

Alæ anticæ unicolores, fusco-pilosæ. Alæ anticæ et posticæ areola apicali 5a brevi.

Phryganea puberula, *Zett. Ins. Lapp.* 1066, 27.
Stenophylax puberulus, *Kol. Gen. et. Sp. Trich.* 63, 1.
North and East Europe.

65. Limnephilus arcticus.

Alæ anticæ unicolores, nigro-pilosæ, areolis apicalibus æqualibus.

Stenophylax arcticus, *Kol. Gen. et. Sp. Trich.* 63, 2.
Sweden.

66. Limnephilus pilosus.

Alæ anticæ unicolores, aureo-pilosæ.

Phryganea pilosa, *Fabr. Ent. Syst.* ii. 76, 6. *Oliv. Enc. Méth.* 540, 7. *De Vill. Ent.* iii. 40, 44. *Cederhielm, Faun. Ingr. Prodr.* 138, 419. *Latr. Hist. Nat. Ins.* xiii. 87, 5. *Pictet, Rech. Phryg.* 134, 2, pl. 6, f. 2.
Limnophilus pilosus, *Billbg. Ent.* 94.
Stenophylax pilosus, *Kol. Gen. et Sp. Trich.* 64, 3.
Europe.

67. Limnephilus striatus.

Alæ anticæ bicolores, in areolis conspersæ.

Phryganea striata, *Linn. Syst. Nat.* ii. 908, 5. *Faun. Suec.* 148, 2. *Aldrovand. Ins.* 763. *Acta Upsalia*, 1736, 27, 2. *Geoffr. Ins.* ii. 246, 1, pl. 13, f. 5. *Frisch. Ins.* xiii. pl. 3. *Valisnieri, Op.* i. 37. *Réaum. Ins.* iii. pl. 13, f. 8, 9, 11. *Albin, Ins.* 763. *Raii, Ins.* 274, 2. *Schæff. Icon.* pl. 168, f. 2, 3. *Fabr. Sp. Ins.* i. 388, 2. *Mant. Ins.* i. 245, 2. *De Vill. Ent.* iii. 28, 9. *Scop. Ent. Carn.* 688. *Fourcroy, Ent. Par.* ii, 353. *Mus. Lesk.* 51, 26. *Billbg. Ent. Ins.* 94. *Rossi, Faun. Etrusc.* 679. *Oliv. Enc. Méth. Ins.* 358, 3. *Wilhelm, Récréat. &c.* iii. f. 32. *Berk. Syn.* i. 151. *Stew. Elem. Nat. Hist.* ii. 213. *Turt. Syst. Nat.* iii. 396, 5. *Latr. Hist. Nat.* xiii. 87, 3. *Pictet; Rech. Phryg.* 132, 1, pl. 6, f. 1.
Limnophilus striatus, *Burm. Handb. Ent.* ii. 2, 933, 16.
Stenophylax striatus, *Kol. Gen. et Sp. Trich.* 64, 4.
Limnephila striata, *Ramb. Hist. Nat. Ins. Neur.* 479, 11.
a—f. England.
g. South France. Presented by F. Walker, Esq.

68. Limnephilus meridionalis.

Alæ anticæ bicolores, in venis conspersæ.

Stenophylax meridionalis, *Kol. Gen. et Sp. Trich.* 65, 5.
Isle of Crete.

69. Limnephilus alpestris.

Alæ anticæ bicolores, circa anastomosim guttatæ, absque parastigmate. . . .

Stenophylax alpestris, *Kol. Gen. et Sp. Trich.* 66, 6.

Carniolia.

70. Limnephilus nigridorsus.

Alæ anticæ bicolores, circa anastomosim guttatæ, macula stigmaticali.

Phryganea nigridorsa, *Pictet, Rech. Phryg.* 158, 28, pl. 10, f. 5.
Stenophylax nigridorsus, *Kol. Gen. et Sp. Trich.* 66, 7.

Europe.

71. Limnephilus pantherinus.

Alæ anticæ bicolores, in areolis guttatæ.

Phryganea pantherina, *Pictet, Rech. Phryg.* 137, 6, pl. 6, f. 1, d, e.
Limnophilus pantherinus, *Burm. Handb. Ent.* ii. 2, 933, 15.
Phryganea guttifera, *Zett. Ins. Lapp.* 1067, 28.
Stenophylax pantherinus, *Kol. Gen. et Sp. Trich.* 67, 8.

Europe.

Group uncertain.

72. Limnephilus dorsalis.

Virescenti-ochraceus; antennæ flavescentes, fusco annulatæ; alæ pallidæ, anticæ hyalinæ margine interiore fusco irroratæ. Long. 5—6½; alar. 14—16 lin.

Limnephilus dorsalis, *Steph. Ill. Brit. Ent. Mand.* vi. 213, 4.
Phryganea concentrica? *Zett.*

England.

73. Limnephilus binotatus.

Sordide ochraceus; alæ anticæ flavescentes, maculis tribus pallidis, stigmate piceo. Long. 6; alar. 14 lin.

Limnephilus binotatus, *Curt. Phil. Mag.* iv. 125. *Steph. Ill. Brit. Ent. Mand.* vi. 215, 8.

Phryganea borealis? *Zett.*

England.

74. LIMNEPHILUS LUNATUS.

Ochraceus; alæ anticæ fuscæ, costa macula centrali alteraque sublunata postice subhyalinis, stigmate magno piceo. Long. 5; alar. 14½ lin.

Limnephilus lunatus, *Curt. Phil. Mag.* iv. 123. *Steph. Ill. Brit. Ent. Mand.* vi. 216, 11.

England.

75. LIMNEPHILUS STIGMA.

Ochraceus; alæ anticæ saturatiores, basi costaque pallidis, disco immaculato stigmate rotundato piceo. Long. 5—6; alar. 14—15 lin.

Limnephilus stigma, *Curt. Phil. Mag.* iv. 123. *Steph. Ill. Brit. Ent. Mand.* vi. 216, 12.

England.

76. LIMNEPHILUS COSTALIS.

Ochraceus; alæ anticæ fuscescentes, nebulis saturatioribus, venis transversis fuscis, alteris plerisque fusco irroratis stigmate perfusco. Long. 6; alar. 13 lin.

Limnephilus costalis, *Steph. Ill. Brit. Ent. Mand.* vi. 217, 14.

England.

77. LIMNEPHILUS MARGINALIS.

Fuscus, subtus ochraceus; alæ anticæ fuscescentes, lunula media, maculaque tripartita postice hyalinis, stigmate piceo. Long. 5½; alar. 12 lin.

Limnephilus marginalis, *Steph. Ill. Brit. Ent. Mand.* vi. 218, 16.

England.

78. LIMNEPHILUS SIGNATUS.

Fuscus, subtus ochraceus; alæ anticæ ochraceo-albidæ, macula media utrinque fusco marginata alba, stigmate pallide fusco. Long. 6; alar. 12 lin.

Limnephilus signatus, *Steph. Ill. Brit. Ent. Mand.* vi. 219, 19.

England.

79. Limnephilus obliquus.

Fuscus, subtus ochraceus; alæ anticæ flavescente-ochraceæ, macula præobliqua pallida, stigmate piceo. Long. 5; alar. 10 lin.

Limnephilus obliquus, *Steph. Ill. Brit. Ent. Mand.* vi. 219, 20.

England.

80. Limnephilus luniger.

Ochraceo-fuscus; alæ anticæ fuscescentes, lunula media maculaque postice subhyalinis, stigmate fusco. Long. 5½; alar. 11 lin.

Limnephilus luniger, *Steph. Ill. Brit. Ent. Mand.* vi. 219, 21.

England.

81. Limnephilus geminus.

Fuscus; alæ anticæ lucidæ, fuscescente-ochraceæ, macula geminata media hyalina, stigmate ochraceo. Long. 3½—5; alar. 9—11 lin.

Limnephilus geminus, *Steph. Ill. Brit. Ent. Mand.* vi. 220, 23.

England.

82. Limnephilus fuscus.

Ochraceo-fuscus; alæ anticæ fuscæ, atomis maculisque quatuor pallidis, stigmate fusco-piceo immaculato; tibiæ anticæ fusco annulatæ. Long. 3½—4; alar. 10—11 lin.

Limnephilus fuscus, *Steph. Ill. Brit. Ent. Mand.* vi. 221, 25.

England.

83. Limnephilus cœnosus.

Ochraceo-fuscus; alæ breves, fuscæ, ochraceo pallido obsolete irroratæ, stigmate obscuro utrinque pallide marginato. Long. 4; alar. 10—11 lin.

Limnephilus cœnosus, *Curt. Phil. Mag.* iv. 123. *Steph. Ill. Brit. Ent. Mand.* vi. 221, 26.

England.

84. Limnephilus punctatissimus.

Ochraceo-fuscus; antennæ fuscæ, ochraceo tenuiter annulatæ; alæ anticæ angustæ, pallide fuscæ, perlepide vageque albido irroratæ. Long. 4¾; alar. 12 lin.

Limnephilus punctatissimus, *Steph. Ill. Brit. Ent. Mand.* vi. 221, 27.

England.

85. Limnephilus Vinculum.

Ochraceo-fuscus; alæ anticæ fuscæ, maculis quatuor pallidis, stigmate fusco pallide irrorato. Long. 3½; alar. 9½—10 lin.

Limnephilus Vinculum, *Curt. Phil. Mag.* iv. 124. *Steph. Ill. Brit. Ent. Mand.* vi. 222, 28.

England.

86. Limnephilus fuscatus.

Ochraceo-fuscus; alæ anticæ pallide fuscæ, marginibus interioribus et posticis saturatioribus, stigmate fusco-piceo pallide irrorato. Long. 4½; alar. 12 lin.

Limnephilus fuscatus, *Steph. Ill. Brit. Ent. Mand.* vi. 222, 30.

England.

87. Limnephilus irroratus.

Ochraceus; antennæ fusco annulatæ; abdominis dorsum fuscum; alæ anticæ pallide ochraceæ, atomis numerosissimis pallidioribus; pedes ochracei, spinis fuscis. Long. 4½; alar. 11 lin.

Limnephilus irroratus, *Steph. Ill. Brit. Ent. Mand.* vi. 223, 32.

England.

88. Limnephilus flavescens.

Ochraceus; alæ anticæ pallide flavescente-ochraceæ, immaculatæ, posticæ pallidissime flavescentes. Long. 6; alar. 14 lin.

Limnephilus flavescens, *Steph. Ill. Brit. Ent. Mand.* vi. 223, 33.

England.

89. Limnephilus notatus.

Ochraceus, dorso fusco; alæ anticæ pallide ferrugineo-flavidæ, atomis saturate fuscis longitudinaliter notatæ, angulo postico fuscescente ochraceo irrorato. Long. 5; alar. 10½ lin.

Limnephilus notatus, *Steph. Ill. Brit. Ent. Mand.* vi. 224, 36.

England.

90. Limnephilus substrigosus.

Ochraceus; thorax et abdomen supra fuscescentia; alæ anticæ pallide ochraceæ margine interno apiceque saturatioribus, strigis duabus obscuris fuscis. Long. 5½; alar. 12 lin.

Limnephilus substrigosus, *Steph. Ill. Brit. Ent. Mand.* vi. 224, 37.

England.

91. Limnephilus bipartitus.

Ochraceus; alæ anticæ pallidiores, margine interno et postico vage fusco irroratis, disco linea longitudinali fusca. Long. 4½—5; alar. 10—11 lin.

Limnephilus bipartitus, *Curt. Phil. Mag.* iv. 124. *Steph. Ill. Brit. Ent. Mand.* vi. 225, 38.

England.

92. Limnephilus præustus.

Fuscus, subtus ochraceus; alæ anticæ pallide ochraceæ, margine postico macula apicali stigmateque ustulatis. Long. 3; alar. 6 lin.

Limnephilus præustus, *Steph. Ill. Brit. Ent. Mand.* vi. 226, 41.

England.

93. Limnephilus centralis.

Ochraceus; alæ anticæ fuscæ, interne ochraceo irroratæ, macula centrali alteraque postice lunulaque marginali pallidis. Long. 4—5; alar. 10—11 lin.

Limnephilus centralis, *Curt. Phil. Mag.* iv. 124. *Steph. Ill. Brit. Ent. Mand.* vi. 227, 43.

England.

94. Limnephilus punctatus.

Fusco-ochraceus; alæ anticæ pallide ochraceæ, interne fusco punctatæ. Long. 5; alar. 10 lin.

Limnephilus punctatus, *Steph. Ill. Brit. Ent. Mand.* vi. 227, 44.

England.

95. Limnephilus elongatus.

Pallide ochraceus; alæ anticæ angustatæ et elongatæ, pallide ochraceæ, interne fusco subirroratæ. Long. 3½; alar. 11—12 lin.

Limnephilus elongatus, *Steph. Ill. Brit. Ent. Mand.* vi. 227, 45.

England.

96. Limnephilus fuliginosus.

Fusco-ochraceus; abdomen pallidum; alæ anticæ fusco-fuliginosæ, atomis pallidioribus obscure notatæ; posticæ hyalinæ, albidæ, iridescentes. Long. 4; alar. 11 lin.

Limnephilus fuliginosus, *Steph. Ill. Brit. Ent. Mand.* vi. 227, 46.

England.

97. Limnephilus ustulatus.

Ochraceus; abdomen pallidum; alæ anticæ ochraceæ, fusco irroratæ, costa immaculata, disco macula magna irregulari fusco-ustulata. Long. 4; alar. 9½ lin.

Limnephilus ustulatus, *Steph. Ill. Brit. Ent. Mand.* vi. 228, 47.

England.

98. Limnephilus incisus.

Ochraceus; alæ pubescentes, subbreves; anticæ margine interno venisque fusco irroratis; posticæ pallidæ ad apicem emarginatæ. Long. 3—4½; alar. 9½—10½ lin.

Limnephilus incisus, *Curt. Phil. Mag.* iv. 124. *Steph. Ill. Brit. Ent. Mand.* vi. 228, 48.

Colpotaulius excisus? *Kol.*

England.

99. LIMNEPHILUS MIXTUS.

Niger; femora, tibiæ alæque fusca; venæ nigræ. Long. 3; alar. 8 lin.

Phryganea mixta, *Pictet, Rech. Phryg.* 142, 11, pl. 8, f. 2.

Geneva.

100. LIMNEPHILUS SERICEUS.

Niger; antennæ et alæ fuscæ; pedes fulvi, tarsis fuscis. Long. 3½; alar. 10 lin.

Phryganea sericea, *Pictet, Rech. Phryg.* 143, 12, pl. 11, f. 3.

Geneva.

101. LIMNEPHILUS GUTTULATUS.

Fuscus; antennæ et pedes fulva; alæ fuscescentes, guttulis albidis indistinctis. Long. 4½; alar. 12 lin.

Phryganea guttulata, *Pictet, Rech. Phryg.* 143, pl. 11, f. 4.

Geneva.

102. LIMNEPHILUS BIGUTTATUS.

Fulvus; alæ nitidæ, basi pubescentes, macula media alba. Long. 4; alar. 11 lin.

Phryganea biguttata, *Pictet, Rech. Phryg.* 144, 14, pl. 11, f. 5.
Phacopteryx granulata? *Kol.*

Geneva.

103. LIMNEPHILUS PUNCTICOLLIS.

Niger; palpi fusci; prothorax fulvo-rufescens, macula dorsali nigra; pedes fulvi, tarsis fuscis; alæ fulvo cinereoque variæ, basi fulvæ. Long. 3½; alar. 13 lin.

Phryganea punctícollis, *Pictet, Rech. Phryg.* 145, 15, pl. 11, f. 6.

Geneva.

104. LIMNEPHILUS RUFICOLLIS.

Fulvus; caput supra antennæ et tarsi nigra; alæ fuscæ macula discali albida. Long. 4; alar. 12 lin.

Phryganea ruficollis, *Pictet, Rech. Phryg.* 145, 16, pl. 8, f. 3.

Geneva.

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105. LIMNEPHILUS SCABRIPENNIS.

Limnephila scabripennis, *Ramb. Hist. Nat. Ins. Neur.* 488, 30.
Europe?

106. LIMNEPHILUS FUSCICORNIS.

Limnephila fuscicornis, *Ramb. Hist. Nat. Ins. Neur.* 486, 28.
Desmotaulius fumigatus?
France.

107. LIMNEPHILUS GUTTATUS.

Limnephila guttata, *Ramb. Hist. Nat. Ins. Neur.* 485, 25.
Goniotaulius fenestratus?
France.

108. LIMNEPHILUS FUSCATUS.

(Nomen bis lectum; vide Sp. 86.)
Limnephila fuscata, *Ramb. Hist. Nat. Ins. Neur.* 483, 22.
Phryganea Megerlei? *Pictet.*
France.

109. LIMNEPHILUS OBSCURUS.

(Nomen bis lectum; vide Sp. 35.)
Limnephila obscura, *Ramb. Hist. Nat. Ins. Neur.* 483, 21.
France.

110. LIMNEPHILUS VARIEGATUS.

Limnephila variegata, *Ramb. Hist. Nat. Ins. Neur.* 482, 20.
Goniotaulius griseus?
France.

111. LIMNEPHILUS VITREUS.

Limnephila vitrea, *Ramb. Hist. Nat. Ins. Neur.* 482, 19.
France.

112. Limnephilus nigritus.

Limnephila nigrita, *Ramb. Hist. Nat. Ins. Neur.* 480, 16.
Chamounix.

113. Limnephilus chrysotus.

Limnephila chrysota, *Ramb. Hist. Nat. Ins. Neur.* 480, 15.
Chamounix.

114. Limnephilus discolor.

Limnephila discolora, *Ramb. Hist. Nat. Ins. Neur.* 480, 14.
Halesus?
Chamounix.

115. Limnephilus rufescens.

Limnephila rufescens, *Ramb. Hist. Nat. Ins. Neur.* 479, 13.
Halesus?
South France?

116. Limnephilus radiatus.

Limnephila radiata, *Ramb. Hist. Nat. Ins. Neur.* 479, 12.
Pyrenees.

117. Limnephilus tessellatus.

Limnephila tessellata, *Ramb. Hist. Nat. Ins. Neur.* 478, 10.
Halesus digitatus?
France.

118. Limnephilus striolatus.

Limnephila striolata, *Ramb. Hist. Nat. Ins. Neur.* 478, 9.
Limnephilus incisus? *Steph.*
France.

119. Limnephilus nebulosus.

(Nomen bis lectum; vide Sp. 126).
Limnephila nebulosa, *Ramb. Hist. Nat. Ins. Neur.* 477, 8.
France.

120. Limnephilus obsoletus.

Limnephila obsoleta, *Ramb. Hist. Nat. Ins. Neur.* 477, 7.
Sierra Nevada, Spain.

121. Limnephilus flavidus.

Limnephila flavida, *Ramb. Hist. Nat. Ins. Neur.* 476, 6.
Barcelona.

122. Limnephilus impurus.

Limnephila impura, *Ramb. Hist. Nat. Ins. Neur.* 476, 5.
Goniotaulius stigmaticus? *Kol.*
France.

123. Limnephilus fulvus.

Limnephila fulva, *Ramb. Hist. Nat. Ins. Neur.* 475, 4.
France.

124. Limnephilus aspersus.

Limnephila aspersa, *Ramb. Hist. Nat. Ins. Neur.* 475, 3.
Stenophylax meridionalis? *Kol.*
South France.

125. Limnephilus submaculatus.

Limnephila submaculata, *Ramb. Hist. Nat. Ins. Neur.* 474, 2.
South France.

126. Limnephilus nebulosus.

Niger; alæ anticæ testaceæ, albido maculatæ et irroratæ, areola costali immaculata; posticæ albidæ; venæ testaceæ. Long. 7 lin.

Limnephilus nebulosus, *Kirby, Fauna Boreali-Americana*, 253, 1, (1837).

British North America.

127. Limnephilus femoralis.

Niger; alæ anticæ dilute testaceæ; pedes testacei, femoribus nigris. Long. 6½ lin.

Limnephilus femoralis, *Kirby, Fauna Boreali-Americana*, 253, 2.

British North America.

128. Limnephilus pilosulus.

Nigro-cinereus; palpis fuscis; antennis pallide annulatis; pedibus testaceis; alis pallescentibus, obsolete fusco nebulosis, pilosis. Long. 3; alar. 8—8½ lin.

Phryganea pilosula, *Zett. Ins. Lapp.* 1066, 24.

Lapland.

129. Limnephilus brevis.

Nigro-cinereus; antennis palpis pedibusque testaceis; alis oblongo ovalibus, cinereo-flavescentibus, obsolete fusco punctatis, pubescentibus, venis dorsalibus costalis pilosis.

Phryganea brevis, *Zett. Ins. Lapp.* 1066, 25.

Lapland.

130. Limnephilus stigmatellus.

Nigro-cinereus; tibiis tarsisque testaceis; alis cinereo-hyalinis, ciliatis, subpubescentibus, stigmate fusco hirto, striga media transversa alba notato.

Phryganea stigmatella, *Zett. Ins. Lapp.* 1066, 26.

Lapland.

Genus 6. CHÆTOPTERYX.

Corpus subcompressum, non depressum. Tibiæ setigeræ; anticæ unicalcaratæ; intermediæ et posticæ tricalcaratæ. Alæ anticæ setis erectis, apex rotundus, areæ ac areolæ tuberculosæ, tuberculis pilis longis, erectis, rigidis armatis, area subcostali et suturali lævibus. Tibiæ intermediæ et posticæ tricalcaratæ.

Chætopteryx, *Steph. Ill. Brit. Ent. Mand.* vi. 232, (1837). *Kolenati, Gen. et Sp. Trich.* 71, 11, pl. 1, f. 11.
Phryganea p., *Fabr., Pictet, Zett.*
Limnephilus p., *Billbg.*

1. Chætopteryx villosa.

Fulvescente-ochracea; antennæ fuscæ; alæ anticæ subgranulatæ, ochraceo-fuscæ, punctis duobus pallidis, areolarum verrucis biseriatis. Long. 4½—5½; alar. 10—12 lin.

Phryganea villosa, *Fabr. Ent. Syst. Suppl.* 200, 6, 7. *Pictet, Rech. Phryg.* 139, 8, pl. 7, f. 3.
Limnephilus villosus, *Billbg. En. Ins.* 94.
Chætopteryx villosa, *Steph. Ill. Brit. Ent. Mand.* vi. 233, 1. *Kol. Gen. et Sp. Trich.* 72, 1.

a—d. England.

2. Chætopteryx brevipennis.

Fusca, subtus ochracea; abdomen nigricans; alæ anticæ tuberculatæ, fulvescente-ochraceæ, punctis tribus minimis pallidis, areolarum verrucis biseriatis. Long. 3—3½; alar. 9—11 lin.

Limnephilus brevipennis, *Curt. Phil. Mag.* iv. 125.
Phryganea tuberculosa, *Pictet, Rech. Phryg.* 140, 9, pl. 7, f. 4.
Phryganea villosa, *Zett. Ins. Lapp.* 1068, 33.
Chætopteryx brevipennis, *Steph. Ill. Brit. Ent. Mand.* vi. 233, 2.
Chætopteryx tuberculosa, *Kol. Gen. et Sp. Trich.* 73, 2.

Europe.

3. Chætopteryx rugulosa.

Alarum anticarum areolæ verrucis uniseriatis.

Chætopteryx rugulosa, *Kol. Gen. et Sp. Trich.* 73, 3.

Dalmatia.

Genus 7. ECCLESIOPTERYX.

Corpus subcompressum, non depressum. Tibiæ setigeræ; intermediæ bicalcaratæ; posticæ tricalcaratæ. Alarum anticarum apex parabolicus, alarum posticarum forum cubitale modice dilatatum, radio subcostali paullo crassiori.

Ecclesiopteryx, *Kolenati, Gen. et Sp. Trich.* 74, 13, pl. 2, f. 13.

1. Ecclesiopteryx Dalecarlica.

Ecclesiopteryx Dalecarlica, *Kol. Gen. et Sp. Trich.* 75, 1.
Dalecarlia.

Genus 8. APATANIA.

Corpus subcompressum, non depressum. Tibiæ setigeræ; intermediæ bicalcaratæ; posticæ quadricalcaratæ. Alarum anticarum apex parabolice rotundatus, radio subcostali valde incrassato ad parastigma non flexo, cubito antico cum ramo clavali per anastomosim juncto, in ala non dilatato, anastomosi postica non obliqua, sed ramo subdiscoidali cum cubito in sectoribus sese cruciante.

Apatania, *Kol. Gen. et Sp. Trich.* 75, 14, pl. 2, f. 14.
Phryganea p., *Pictet, Zett.*
Limnophilus? p., *Burm.*

1. Apatania vestita.

Phryganea vestita, *Zett. Ins. Lapp.* 1071, 45.
Phryganea fimbriata? *Pictet, Rech. Phryg.* 159, 30, pl. 11, f. 11.
Limnophilus pusillus? *Burm. Handb. Ent.* ii. 2, 931, 1.
Apatania vestita, *Kol. Gen. et Sp. Trich.* 76, 1.
Europe.

Genus 9. ANABOLIA.

Corpus subcompressum. Palpi maxillares articulo ultimo elongato filiformi. Tibiæ setigeræ. Alæ anticæ pilosæ, angustæ, margine postico rotundato.

Anabolia p., *Steph. Ill. Brit. Ent. Mand.* vi. 229.

Phryganea p., *Linn.; Deg.; Cederh.; Geoffr.; De Vill.; Fabr.; Gmel.; Lat.; Pict.; Zett.*
Limnephilus p., *Leach; Billb.*
Limnophilus p., *Burm.*
Stathmophorus, *Kol.*
Limnephila p., *Ramb.*

1. ANABOLIA FUSCA.

Nigricante-fusca; tibiæ posticæ ochraceæ; alæ subochraceo-fuscescentes, venis piceis. Long. 5—7; alar. 10—15.

Phryganea fusca, *Linn. Syst. Nat.* ii. 910, 20. *Faun. Suec.* 1500. *Deg. Ins.* ii. 407, 4, pl. 15, f. 11—14. *Cederhielm, Faun. Ingr. Prodr.* 137, 418. *Mus. Lesk.* 51, 33. *Geoffr. Hist. Nat. Ins.* ii. 247, 4. *De Vill. Ent.* iii. 34, 24. *Fabr. Sp. Ins.* i. 388, 4. *Mant. Ins.* i. 245, 4. *Ent. Syst.* ii. 75, 4. *Gmel. ed. Syst. Nat.* i. 5, 2635, 20. *Latr. Hist. Nat. Ins.* xiii. 90, 16. *Pictet, Rech. Phryg.* 153, 22, pl. 10, f. 1. *Zett. Ins. Lapp.* 1067, 31.
Limnephilus nervosus, *Leach, Sam. Comp.* pl. 7, f. 3. *Billbg. En. Ins.* 94.
Anabolia nervosa, *Steph. Ill. Brit. Ent. Mand.* vi. 230, 1.
Limnophilus fuscus, *Burm. Handb. Ent.* ii. 2, 931, 6.
Stathmophorus fuscus, *Kol. Gen. et Sp. Trich.* 61, 2.
Limnephila fusca, *Ramb. Hist. Nat. Ins. Neur.* 487, 29.
Var.? Anabolia lurida, *Steph. Ill. Brit. Ent. Mand.* vi. 330, 2. *Ochraceo-fusca, subtus lurido-ochracea; antennis fuscis; alis anticis lurido-ochraceis, macula obsoleta albida, posticis hyalinis, apice lurido.*

a, b. England.
c, d. ———? From Mr. Children's collection.

Genus 10. ENOICYLA.

Corpus subcompressum, non depressum. Tibiæ setigeræ; intermediæ et posticæ bicalcaratæ. Alæ anticæ apice rotundatæ: alæ posticæ foro cubitali angustato, areola apicali quinta in ala anastomosim non attingente, radio subcostali incrassato.

Enoicyla, *Ramb. Nat. Hist. Ins. Neur.* 488.
Phryganea p.? *Fabr.; Coq.; Pictet.*
Limnophilus p., *Burm.*
Ptyopteryx, *Kol.*
Dromophila, *V. Heyden.*

1. ENOICYLA PUSILLA.

Niger; pedes flavi, tibiis tarsisque apice femoribusque nigricantibus; alæ subflavescentes, venis fuscis.

Phryganea pygmæa? *Fabr.*, *Coq.*
Phryganea fimbriata? *Pict.*
Limnophilus pusillus, *Burm. Handb. Ent.* ii.
Enoicyla silvatica, *Ramb. Hist. Nat. Ins. Neur.* 488.
Ptyopteryx Reichenbachii, *Kol. Gen. et Sp. Trich.* 74, 1.
Dromophila montana, *Von Heyden, Ent. Zeit. Stett.*

Europe.

Genus 11. MONOCENTRA.

Tibiæ intermediæ et posticæ unicalcaratæ. Alæ subpilosæ et subsquamosæ.

Monocentra, *Ramb. Hist. Nat. Ins. Neur.* 489.
Phryganea?

1. MONOCENTRA LEPIDOPTERA.

Nigra, fuliginosa, hirta; abdomen rufescens; tibiæ posticæ subtus tarsique flavescentia; alæ nigro-fuscæ.

Monocentra lepidoptera, *Ramb. Hist. Nat. Ins. Neur.* 489.

Sardinia.

Genus 12. BARYPENTHUS.

Palpi maxillares hirsuti, maris 3-articulati, fœminæ 5-articulati. Tibiæ posteriores vix in apice nec in medio calcaratæ. Alæ posticæ dilatatæ, areola postica instructæ.

Barypenthus, *Burm. Handb. Ent.* ii. 2, 928, 14.

1. BARYPENTHUS CONCOLOR.

Totus niger, opacus; corpore subtus pedibusque dilutioribus.

Barypenthus concolor, *Burm. Handb. Ent.* ii. 2, 929, 2.

Brazil.

2. BARYPENTHUS RUFIPES.

Niger, opacus; pedes obscure ochracei; alæ anticæ supra rufo-hirtæ, subtus dimidio auro-hirtæ.

Barypenthus rufipes, *Burm. Handb. Ent.* ii. 2, 929, 2.

Brazil.

Fam. 2. LEPTOCERIDÆ.

Antennæ setaceæ. Palpi maxillares elongati, hirsutissimi. Pedes calcarati. Alæ anticæ venis transversis. Alæ posticæ plicatæ.

Leptoceridæ, *Leach, Steph. Ill. Brit. Ent. Mand.* vi. 191, (1836).
Isopalpoidea p., *Kolenati.*

Genus 1. ODONTOCERUS.

Antennæ graciles, alis longiores, maris denticulatæ. Tibiæ posteriores quadricalcaratæ.

Odontocerus, *Leach, Steph. Ill. Brit. Ent. Mand.* vi. 192, (1836).
Phryganea p., *Scopoli.*

1. ODONTOCERUS ALBICORNIS.

Cinereo-fuscus; antennæ albido-ochraceæ; alæ cinereæ aut canescentes, vix maculatæ. Long. 4—6; alar. 15—18 lin.

Phryganea albicornis, *Scop. Ent. Carn.* 689. *Schr. Ins. Austr.* 619. *De Vill. Ent.* iii. 36, 29. *Oliv. Enc. Méth.* 555, 2.
Odontocerus griseus, *Leach, Edin. Encycl.* ix. 136.
Mystacide albicornis, *Pictet, Rech. Phryg.* 162, 1, pl. 12, f. 1.

a—h. England.

Genus 2. MOLANNA.

Antennæ incrassatæ, alis non longiores, haud denticulatæ. Tibiæ posteriores quadricalcaratæ.

Molanna, *Curt. Phil. Mag.* iv. 214. *Steph. Ill. Brit. Ent. Mand.* vi. 202.

1. Molanna nigripalpis.

Fusca; antennæ fulvæ, fusco guttatæ; thorax et pedes fulvi; alæ anticæ ochraceo-sericeæ, posticæ pallide fuscescentes. Long. 3; alar. 12 lin.

Molanna nigripalpis, *Steph. Ill. Brit. Ent. Mand.* vi. 203, 1.

England.

2. Molanna angustata.

Fusca; palpi pedesque rufo-ochracei; alæ anticæ subfulvæ venis fuscis; posticæ fuscescentes. Long. 3; alar. 12 lin.

Molanna angustata, *Curt. Phil. Mag.* iv. 264. *Steph. Ill. Brit. Ent. Mand.* vi. 203, 2. *Burm. Handb. Ent.* ii. 922, 1.

England.

3. Molanna maculipennis.

Niger; pedes fulvi; tibiis tarsisque anticis femoribusque obscuris; alæ anticæ ochraceæ, nigricante-maculatæ. Long. —; alar. 16. lin.

Odontocerus maculipennis, *Curt. Phil. Mag.* iv. 214. *Steph. Ill. Brit. Ent. Mand.* vi. 193.

Mystacide cylindrica, *Pictet, Rech. Phryg.* 164, 2, pl. 12, f. 2.

Molanna cylindrica, *Burm. Handb. Ent.* ii. 922, 2.

England.

Genus 3. CERACLEA.

Palpi maxillares articulis 1o et 2o brevibus. Tibiæ posteriores bicalcaratæ.

Ceraclea, *Leach, Steph. Ill. Brit. Ent. Mand.* vi. 193.

Phryganea p., *Latr.*

1. Ceraclea nervosa.

Nigra; pedes obscure ochracei, nebulis obscurioribus; alæ anticæ cinereæ venis fuscis, posticæ hyalinæ obscuræ. Long. 4; alar. 11—13 lin.

Phryganea nervosa, *Latr. Hist. Nat. Ins.* xiii. 91.
Ceraclea nervosa, *Steph. Ill. Brit. Ent. Mand.* vi. 194, 1.
a—d. England.
e. ——— ? From Mr. Children's collection.

Genus 4. LEPTOCERUS.

Palpi maxillares articulo 1o tantùm brevi. Tibiæ posteriores bicalcaratæ.

Phryganea p., *Linn.*, *Fabr.*
Mystacide, *Latr.*, *Pictet.*
Leptocerus, *Leach*, *Steph. Ill. Brit. Ent. Mand.* vi. 194.
Mystacides, *Burm.*
Mystacida, *Rambur.*

Group 1.

Alarum anticarum areolæ apicales linea subcurvata venarum transversarum inclusæ.

Steph. Ill. Brit. Ent. Mand. vi. 195.

1. Leptocerus ochraceus.

Pallide ochraceus; thorax ferrugineus, lineis tribus obscuris; alæ posticæ hyalinæ. Long. 3½—4; alar. 12—13 lin.

Leptocerus ochraceus, *Curt. Brit. Ent.* ii. 57. *Steph. Ill. Brit. Ent. Mand.* vi. 195, 1.

a. England.

2. Leptocerus testaceus.

Rufescente-ochraceus; alæ posticæ hyalinæ, apice subfuscæ. Long. —; alar. 8 lin.

Leptocerus testaceus, *Curt. Phil. Mag.* iv. 214. *Steph. Ill. Brit. Ent. Mand.* vi. 195, 2.

a—c. England.
d, e. ——— ? From Mr. Children's collection.

3. Leptocerus obtusus.

Niger, nitidus; antennæ et pedes obscure fusci; alæ fuscæ, anticæ apice rotundato-obtusæ. Long. 3—3½; alar. 7½—8 lin.

Leptocerus obtusus, *Steph. Ill. Brit. Ent. Mand.* vi. 195, 3.

a, b. ——— ? From Mr. Children's collection.

4. Leptocerus nigricans.

Niger, nitidus; antennæ albo annulatæ; pedes obscure fusci, tarsis ochraceis; alæ fuscæ. Long. 3½; alar. 9 lin.

Leptocerus nigricans, *Steph. Ill. Brit. Ent. Mand.* vi. 196, 5, 4.

England.

5. Leptocerus ater.

Ater; antennæ nigro alboque subannulatæ; pedes nigri; alæ immaculatæ subiridescentes. Long. 3; alar. 9. lin.

Mystacide atra, *Pictet, Rech. Phryg.* 169, 9, pl. 12, f. 4.
Leptocerus ater, *Steph. Ill. Brit. Ent. Mand.* vi. 196, 5.
Mystacides ater, *Burm. Handb. Ent.* ii. 919, 4.

England.

6. Leptocerus niger.

Niger, nitidus; antennæ nigro alboque annulatæ; pedes obscure fusci; alæ anticæ splendide chalybeo-nigræ. Long. 3—3½; alar. 8½—9½ lin.

Phryganea nigra, *Linn. Syst. Nat. ed.* 12. 909, 2. *Geoffr. Ins.* ii. 250, 10. *Deg. Ins.* ii. 580, 12, pl. 15, f. 21—23. *Raii, Ins.* 275. *Roemer, Gen. Ins.* pl. 24, f. 10, 11. *De Vill. Ent.* iii. 31, 15. *Mus. Lesk.* 51, 42. *Cederh. Faun. Ingr. Prod.* 139, 424. *Rossi, Faun. Etrusc.* 681. *Oliv. Enc. Méth.* 545, 21. *Fabr. Sp. Ins.* i. 390, 14. *Mant. Ins.* i. 246, 17. *Ent. Syst.* ii. 79, 20. *Gmel. ed. Syst. Nat.* i. v. 2634, 11. *Schr. Faun. Boic.* ii. 183, 1903. *Latr. Hist. Nat.* xiii. 90, 15. *Berk. Syn.* i. 151. *Stew. Elem. Nat. Hist.* ii. 214. *Turt. Syst. Nat.* iii. 397. *Zett. Ins. Lapp.* 1072, 53.

Phryganea fuliginosa, *Scopoli, Ent. Carn.* 696.
Mystacide nigra, *Pictet, Rech. Phryg.* 169, 10, pl. 12, f. 5.
Mystacides niger, *Burm. Handb. Ent.* ii. 919, 5.

Mystacida nigra, *Ramb. Hist. Nat. Ins. Neur.* 511, 8.
Leptocerus niger, *Steph. Ill. Brit. Ent. Mand.* vi. 196, 6.
a—e. England.
f—h. ———? From Mr. Children's collection.

Group 2.

Alarum anticarum venæ 2a et 3a apud marginem posteriorem bifidæ.

Steph. Ill. Brit. Ent. Mand. vi. 196.

7. Leptocerus perfuscus.

Niger; antennæ albo nigroque annulatæ; pedes ochracei; alæ anticæ cupreo-fuscæ, posticæ pallidiores. Long. 3; alar. 9 lin.

Leptocerus perfuscus, *Steph. Ill. Brit. Ent. Mand.* vi. 196, 7.

England.

8. Leptocerus aureus.

Niger, cano-pilosus; antennæ albo annulatæ; pedes pallidi, tarsis albis fusco annulatis; alæ anticæ aureo-sericeæ, posticæ cinereæ iridescentes. Long. 3; alar. 10—11 lin.

Mystacide aurea, *Pictet, Rech. Phryg.* 164, 3, pl. 13, f. 1.
Leptocerus aureus, *Steph. Ill. Brit. Ent. Mand.* vi. 197, 8.

a. England.

9. Leptocerus annulatus.

Niger; antennæ fuscæ, albo subannulatæ; palpi pedesque fusci; alæ fuscæ, maculis holosericeo-fulvescentibus ornatæ. Long. 3; alar, 10—11 lin.

Phryganea annulata, *Mus. Lesk. Pars Ent.* 52, 43. *Gmel. ed. Syst. Nat.* 2037. *Oliv. Enc. Méth.* 560, 31.
Mystacide annulata, *Pictet, Rech. Phryg.* 165, 4, pl. 13, f. 2.
Leptocerus annulatus, *Steph. Ill. Brit. Ent. Mand.* vi. 197, 9.

England.

10. Leptocerus dissimilis.

Fulvo-ochraceus; antennæ albidæ, fusco annulatæ; alæ anticæ cinereo-ochraceæ immaculatæ, posticæ hyalinæ iridescentes. Long. 3; alar. 8½—9 lin.

Leptocerus dissimilis, *Steph. Ill. Brit. Ent. Mand.* vi. 197, 10.

a. England.

11. Leptocerus bimaculatus.

Niger; alæ fuscæ, anticæ macula lateralî duplici flava aut cinerea. Long. 2½; alar. 9 lin.

Leptocerus bimaculatus, *Steph. Ill. Brit. Ent. Mand.* vi. 197, 11.

England.

12. Leptocerus interruptus.

Niger; alæ fuscæ, anticæ strigis aliquot interruptis niveis margineque postico albo punctato. Long. 2½—3; alar. 8½—9½ lin.

Phryganea interrupta, *Fabr. Ent. Syst.* ii. 79. *Stew. Elem. Nat. Hist.* ii. 215. *Turt. Syst. Nat.* iii. 397. *Donov. Ins.* xvi. pl. 551.

Leptocerus interruptus, *Leach, Edinb. Enc.* ix. 136, 28. *Steph. Ill. Brit. Ent. Mand.* vi. 198, 12.

Mystacides interruptus, *Burm. Handb. Ent.* 919, 6.

a—f. England.

13. Leptocerus affinis.

Ater; antennæ albo annulatæ; pedes subochracei, tarsis albis; alæ anticæ punctis duobus marginalibus albis. Long. 3; alar. 8½ lin.

Leptocerus affinis, *Leach, MSS. Steph. Ill. Brit. Ent. Mand.* vi. 198, 13.

England.

Group 3.

Alarum anticarum vena 2a bifida, 5a trifida apud marginem posteriorem.

Steph. Ill. Brit. Ent. Mand. vi. 198.

14. Leptocerus assimilis.

Viridi-fuscus; antennæ albo fuscoque annulatæ; alæ anticæ cinereo-ochraceæ immaculatæ, posticæ hyalinæ iridescentes. Long. 2½—3; alar. 8—9 lin.

Leptocerus assimilis, *Steph. Ill. Brit. Ent. Mand.* vi. 198, 14.
Mystacida fulva, *Ramb. Hist. Nat. Ins. Neur.* 509, 3.

a. England.

15. Leptocerus annulicornis.

Pallide fuscus; palpi pedesque ochracei; antennæ albæ, nigro annulatæ; alæ anticæ cinereo-fuscæ, posticæ subhyalinæ fuscescentes. Long. 2½—3; alar. 9—10 lin.

Leptocerus annulicornis, *Steph. Ill. Brit. Ent. Mand.* vi. 199, 15.

England.

16. Leptocerus seminiger.

Niger; antennæ albo annulatæ; pedes pallidi; alæ anticæ cinereo-ochraceæ, posticæ atro-fuscæ immaculatæ. Long. 3; alar. 9 lin.

Leptocerus seminiger, *Steph. Ill. Brit. Ent. Mand.* vi. 199, 16.

England.

17. Leptocerus cinereus.

Cinereo-fuscus; tibiæ tarsique albido-ochracea; alæ anticæ canopubescentes, costa nebulisque aliquot subochraceis. Long. 4—4½; alar. 12—13 lin.

Leptocerus cinereus, *Curt. Phil. Mag.* iv. 214. *Steph. Ill. Brit. Ent. Mand.* vi. 199, 17.

England.

18. Leptocerus filosus.

Niger ; caput subtus fulvum ; antennæ graciles, fusco alboque annulatæ ; pedes pallidi, fusco annulati ; alæ anticæ ochraceo-fuscæ marginibus flavescentibus, posticæ hyalinæ iridescentes. Long. 3—3½ ; alar. 11 lin.

Phryganea filosa, *Linn. Syst. Nat. ed.* 12, ii. 910, 16. *Faun. Suec.* 1493. *Mus. Lesk.* 52, 40. *Fabr. Sp. Ins.* i. 991, 23. *Mant. Ins.* i. 246, 26. *Ent. Syst.* ii. 80, 30. *Oliv. Enc. Méth.* 547, 34. *Gmel. ed. Syst. Nat.* i. 5, 2634, 16. *Stew. Elem. Nat. Hist.* ii. 215. *Turt. Syst. Nat.* iii. 397. *Latr. Hist. Nat.* xiii. 92, 24.

Mystacide filosa, *Pictet, Rech. Phryg.* vi. 166, 5, pl. 13, f. 3.

Leptocerus filosus, *Steph. Ill. Brit. Ent. Mand.* vi. 199, 18.

Mystacides filosus, *Burm. Handb. Ent.* ii. 920, 8.

Mystacida obsoleta, *Ramb. Hist. Nat. Ins. Neur.* 509, 4.

a. England.

19. Leptocerus caliginosus.

Niger ; antennæ tenuissime albo annulatæ ; pedes ochraceo-fusci, tarsis pallidioribus ; alæ obscure fuscæ immaculatæ, posticæ basi subiridescentes.

Leptocerus caliginosus, *Steph. Ill. Brit. Ent. Mand.* vi. 200, 19.

England.

20. Leptocerus aterrimus.

Ater ; antennæ albo tenuissime annulatæ ; pedes fusci ; alæ fusco-nigræ, venis saturatioribus. Long. 3 ; alar. 8½—9½ lin.

Leptocerus aterrimus, *Steph. Ill. Brit. Ent. Mand.* vi. 200, 20.

England.

21. Leptocerus bilineatus.

Niger ; palpi fusci ; antennæ fuscæ, obscure flavo annulatæ ; pedes ochracei ; alæ fuscæ, lineis duobus abbreviatis albidis. Long. 2¾ ; alar. 8 lin.

Phryganea bilineata, *Linn. Syst. Nat. ed.* 12, ii. 910, 19. *Faun. Suec.* 1496. *De Vill. Ent.* iii. 34, 23. *Fabr. Sp. Ins.* i. 991, 18. *Mant. Ins.* i. 246, 21. *Ent. Syst.* ii. 79, 24. *Oliv. Enc. Méth.* 546, 27. *Schr. Faun. Boic.* ii. 183, 1914. *Gmel. ed. Syst. Nat.* i. 2635, 19. *Latr. Hist. Nat.* xiii. 91, 20. *Turt. Syst. Nat.* iii. 397.

Mystacide bilineata, *Pictet, Rech. Phryg.* 167, 7, pl. 13, f. 4.
Leptocerus bilineatus, *Steph. Ill. Brit. Ent. Mand.* vi. 200, 21.
England.

Group 4.

Alæ anticæ venis sat indistinctis, 2a tantum apud marginem posteriorem bifida.

Steph. Ill. Brit. Ent. Mand. vi. 200.

22. LEPTOCERUS QUADRIFASCIATUS.

Niger; alæ ochraceo-testaceæ, anticæ fasciis quatuor latis nigris, posticæ immaculatæ. Long. 2½—3; alar. 8—10 lin.

Phryganea quadrifasciata, *Fabr. Ent. Syst.* ii. 80, 28. *Turt. Syst. Nat.* iii. 937. *Zett. Ins. Lapp.* 1072, 50.
Leptocerus quadrifasciatus, *Steph. Ill. Brit. Ent. Mand.* vi. 200, 22.
Mystacida quadrifasciata, *Ramb. Hist. Nat. Ins. Neur.* 511, 9.

a. England. Presented by J. C. Dale, Esq.
b—e. England.
f—h. ——— ? From Mr. Children's collection.

23. LEPTOCERUS LONGICORNIS.

Fuscus; antennæ albidæ; pedes albidi; alæ anticæ cinereo et nigricanti variæ, posticæ cinereæ immaculatæ. Long. 3; alar. 9½ lin.

Phryganea longicornis, *Linn. Syst. Nat.* ii. 910, 15. *Faun. Suec.* 1492. *Fabr. Sp. Ins.* i. 391, 21. *Mant. Ins.* i. 246, 24. *Geoffr. Ins. Par.* ii. 249, 1. *Gmel. ed. Syst. Nat.* i. 5, 2634, 15. *Berk. Syn.* i. 151. *Stew. El. Nat. Hist.* ii. 214. *Turt. Syst. Nat.* iii. 397.
Mystacides longicornis, *Burm. Handb. Ent.* ii. 918, 2.
Leptocerus longicornis, *Steph. Ill. Brit. Ent. Mand.* vi. 201, 23.
England.

24. LEPTOCERUS RUFOGRISEUS.

Fuscus; antennæ albæ nigro maculatæ; pedes albidi; alæ anticæ rufo-cinereæ atomis pallidioribus, posticæ fuscæ subhyalinæ. Long. 2½; alar. 7½—8 lin.

Leptocerus rufogriseus, *Steph. Ill. Brit. Ent. Mand.* vi. 201, 24.
England.

25. Leptocerus bicolor.

Ochraceo-ferrugineus; antennæ nigræ, albo annulatæ; pedes fulvi; abdomen nigricans; alæ posticæ nigricantes. Long. 2¼—3¾; alar. 6—8 lin.

Leptocerus bicolor, *Curt. Phil. Mag.* iv. 214. *Steph. Ill. Brit. Ent. Mand.* vi. 201, 25.

a—e. England.

26. Leptocerus elongatus.

Pallide rufo-ochraceus; antennæ pallide cinereæ, albido annulatæ; pedes pallide cinerei; alæ anticæ angustæ ochraceæ atomis paucis atris, posticæ subfusco-hyalinæ iridescentes. Long. 2; alar. 7 lin.

Leptocerus elongatus, *Steph. Ill. Brit. Ent. Mand.* vi. 201, 26.

a. England.

27. Leptocerus tineiformis.

Fusco-cinereus; antennæ albæ, nigro annulatæ; pedes ochraceo-albi; alæ anticæ angustissimæ, venis fusco irroratis. Long. 2—2½; alar. 6—6½ lin.

Leptocerus tineiformis, *Curt. Phil. Mag.* iv. 214. *Steph. Ill. Brit. Ent. Mand.* vi. 202, 27.

England.

28. Leptocerus attenuatus.

Fuscus; antennæ pallidæ, fusco annulatæ; abdomen pallide ochraceum; pedes pallide ochracei; alæ angustissimæ, subhyalinæ immaculatæ. Long. 1¾—2; alar. 5—6 lin.

Leptocerus attenuatus, *Steph. Ill. Brit. Ent. Mand.* vi. 202, 28.

England.

Group ?

29. LEPTOCERUS ALBIFRONS.

Niger; antennæ albo annulatæ; macula inter oculos alba; pedes cinerei; alæ anticæ fuscæ, fasciis tribus interruptis albis.

Phryganea albifrons, *Linn. Syst. Nat, ed.* 12, ii. 910, 18. *Faun. Suec.* 1495. *De Vill. Ent.* iii. 33, 22. *Oliv. Enc. Méth. Ins.* 547, 36. *Gmel. ed. Syst. Nat.* i. 4, 2635, 18. *Zett. Ins. Lapp.* 1072, 51.

Mystacide albifrons, *Pictet, Rech. Phryg.* 168, 8, pl. 13, f. 5.

Mystacida albifrons, *Ramb. Hist. Nat. Ins. Neur.* 510, 6.

L. bilineatus, var. ?

a. England.

30. LEPTOCERUS VENOSUS.

Mystacida venosa, *Ramb. Hist. Nat. Ins. Neur.* 508, 1.

Phryganea Fennica ? *Fabr. Gmel.*

Phryganea barbata ? *Zett. Ins. Lapp.* 1071, 47. *Nigra; palpis longe hirsutis; tarsis albidis; alis cinereo-fuscis, venis longitudinalibus duabus postice infra venas transversas furcatis.* Long. fere 3; alar. 8—9 lin.

France.

31. LEPTOCERUS BIFASCIATUS.

Niger; antennæ albo annulatæ; pedes albidi, fusco annulati; alæ anticæ atræ, fasciis duabus punctisque nonnullis albis. Long. 4½ lin.

Phryganea bifasciata, *Fourcr. Ent. Par.* ii. 358, 17. *Oliv. Enc. Méth.* 558, 20.

Mystacide bifasciata, *Pictet, Rech. Phryg.* 166, 6, pl. 12, f. 3.

Mystacides bifasciatus, *Burm. Handb. Ent.* ii. 920, 10.

Europe.

32. LEPTOCERUS ALBIMACULA.

Mystacida albimacula, *Ramb. Hist. Nat. Ins. Neur.* 509, 2.

France.

33. LEPTOCERUS FILICORNIS.

Cinereus; antennæ fulvæ, longissimæ; pedes flavescentes; alæ ciliatæ. Long. 3½ lin.

Mystacide filicornis, *Pictet, Rech. Phryg.* 171, 12, pl. 12, f. 6.

Geneva.

34. LEPTOCERUS HECTICUS.

Totus flavo-cinereus ; alarum vena longitudinali unica infra venas transversas medias furcata. Long. 3 ; alar. 8—9 lin.

Phryganea hectica, *Zett. Ins. Lapp.* 1072, 48.

Lapland.

35. LEPTOCERUS UNIGUTTATUS.

Cinereus, subtus fulvus ; antennæ albidæ, fusco annulatæ ; pedes fulvi ; alæ fulvæ, macula communi alba. Long. 4½ lin.

Mystacide uniguttata, *Pictet, Rech. Phryg.* 170, 11, pl. 13, f. 6.

Geneva.

36. LEPTOCERUS GENEI.

Mystacida Genei, *Ramb. Hist. Nat. Ins. Neur.* 511, 7.

Sardinia.

37. LEPTOCERUS LACUSTRIS.

Fulvus ; alæ anticæ maculis nonnullis apicalibus posticisque. Long. 3 lin.

Mystacide lacustris, *Pictet, Rech. Phryg.* 171, 13, pl. 13, f. 7.

Geneva.

38. LEPTOCERUS RUFINUS.

Phryganea rufina, *Linn. Syst. Nat.* ii. 910, 16.
Mystacide rufina, *Pict. Rech. Phryg.* 166, 5, pl. 13, f. 3.
Mystacides rufinus, *Burm. Handb. Ent.* ii. 920, 8.
Mystacida rufina, *Ramb. Hist. Nat. Ins. Neur.* 510, 5.

Europe.

39. LEPTOCERUS VETULUS.

Mystacida vetula, *Ramb. Hist. Nat. Ins. Neur.* 512, 12.

France.

40. LEPTOCERUS NOTATUS.

Mystacida notata, *Ramb. Hist. Nat. Ins. Neur.* 514, 18.

France.

41. LEPTOCERUS RUFUS.

Mystacida rufa, *Ramb. Hist. Nat. Ins. Neur.* 514, 17.
France.

42. LEPTOCERUS CONSPERSUS.

Mystacida conspersa, *Ramb. Hist. Nat. Ins. Neur.* 514, 16.
France.

43. LEPTOCERUS FURVUS.

Mystacida furva, *Ramb. Hist. Nat. Ins. Neur.* 512, 11.

44. LEPTOCERUS LEUCOPHÆUS.

Mystacida leucophæa, *Ramb. Hist. Nat. Ins. Neur.* 512, 13.
Mystacida subtrifasciata, var., *Ramb. Hist. Nat. Ins. Neur.* 513, 14.
France.

45. LEPTOCERUS SUBFASCIATUS.

Mystacida subfasciata, *Ramb. Hist. Nat. Ins. Neur.* 513, 15.
France.

46. LEPTOCERUS FERRUGINEUS.

Mystacida ferruginea, *Ramb. Hist. Nat. Ins. Neur.* 512, 10.
France.

47. LEPTOCERUS OCHRATUS.

Nigricans, flavo-pilosus; antennis fuscis tenuiter pallido annulatis; alis ochraceis; pedibus testaceis. Long. $1\frac{1}{2}$; alar. 5 lin.

Phryganea ochrata, *Dalm. MSS. Zett. Ins. Lapp.* 1072, 49.
Scandinavia.

48. LEPTOCERUS RESPERSELLUS.

Setodes respersella, *Ramb. Hist. Nat. Ins. Neur.* 515, 1.
France.

49. LEPTOCERUS PUNCTATELLUS.

Setodes punctatella, *Ramb. Hist. Nat. Ins. Neur.* 516, 2.

50. LEPTOCERUS PUNCTATUS.

Phryganea punctata, *Fabr. Ent. Syst.* ii. 80, 29.
Mystacides punctatus, *Burm. Handb. Ent.* ii. 919, 7.
Setodes punctata, *Ramb. Hist. Nat. Ins. Neur.* 516, 4.
Setodes punctella, var.? *Ramb. Hist. Nat. Ins. Neur.* 516, 5.
Europe.

51. LEPTOCERUS ASPERSELLUS.

Setodes aspersella, *Ramb. Hist. Nat. Ins. Neur.* 516, 3.
France.

52. LEPTOCERUS SENILIS.

Fuscus; corpore supra cum alis anticis hirto; pilis dorsi cinereis, alarum testaceis; antennis pedibusque testaceis, his nigro annulatis.

Mystacides senilis, *Burm. Handb. Ent.* ii. 2, 920, 11.
Germany.

Burmeister arranges the species which he has described in the following groups:—

Group 1.—Eyes very large, each of them broader than the space between them. Three first joints of the maxillary palpi of equal length; fourth shorter; fifth longer but much more slender than the preceding.

A. Fore-tibiæ with apical spurs; middle tibiæ longer than the hind tibiæ, with two spurs near the base. L. albicornis.
B. Fore-tibiæ without apical spurs. Posterior tibiæ with a pair of more slender and rather longer apical spurs but without any middle spurs. L. longicornis, concolor.

Group 2.—Eyes much smaller; each of them much less than the space between them.

A. First joint of the maxillary palpi almost as long as the second, which is as long as the third. Fore-tibiæ without spurs at the tips.
a. Last joint of the maxillary palpi longer than the preceding. Posterior tibiæ with very small spurs at the tips. L. ater, niger, interruptus, punctatus, ochraceus.

b. Last joint of the maxillary palpi shorter than the preceding; first thinly pilose. Posterior tibiæ with long spurs at the tips. L. filosus.

B. First joint of the maxillary palpi smaller in proportion, hardly half as long as the second, which is as long as the third or somewhat longer; last joint longer and more slender than the preceding.

a. Fore-tibiæ with little spurs at the tips, those of the hinder tibiæ somewhat larger. L. 3-punctatus, bifasciatus, senilis.

b. Spurs at the tips of all the tibiæ equal in size, but the hind-tibiæ have a single little spur somewhat above one-fifth of their length. L. gracilis, princeps, fennicus (*Fabr.* = uniguttatus, *Pict.*), bimaculatus, bilineatus, 4-fasciatus, minutus.

53. Leptocerus concolor.

Fuscus; corpore supra cum alis anticis fulvo-hirto; antennis palpisque nigris, articulo 1o utriusque organi pedibusque flavis.

Mystacides concolor, *Burm. Handb. Ent.* ii. 2, 919, 3.

Germany.

54. Leptocerus albicornis.

Fusco-niger; antennæ corpore cum alis triplo longiores, apice niveæ; pedes dilutiores.

Mystacides albicornis, *Burm. Handb. Ent.* ii. 2, 918, 1.

Brazil.

55. Leptocerus gracilis.

Testaceus; antennis tarsisque fuscis, illis apice albis, dorso alisque pilosis, pilis testaceis cum albis intermixtis appressis nigrisque longioribus patentibus.

Mystacides gracilis, *Burm. Handb. Ent.* ii. 2, 921, 12.

Brazil.

56. Leptocerus princeps.

Fulvo-fuscus; antennis apice albo annulatis; pedibus cinereo-testaceis; dorso alisque pilosis, pilis alarum fuscis et flavis in maculas alternas congestis.

Mystacides princeps, *Burm. Handb. Ent.* ii. 2, 921, 13.

Brazil.

57. Leptocerus sepulchralis.

Niger; antennæ albo annulatæ; abdomen apice ferrugineum; pedes testacei; alæ nigricantes.

Psychomyia sepulchralis, *Barnston, MSS.*
L. niger, var.?

Black, clothed with black hairs: antennæ more than twice the length of the body, with a white ring on each joint, wholly black towards the tips: abdomen ferruginous at the tip: legs testaceous: wings blackish, deeply fringed. Length of the body 2½ lines; of the wings 6 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

58. Leptocerus resurgens.

Fuscus, albido-hirtus; alæ anticæ fuscæ albo-maculatæ, posticæ cinereæ.

Brown, with a hoary tinge, clothed with whitish hairs: palpi and legs tawny, with whitish down: palpi not hairy: fore-wings brown, with white spots at the base and about the middle and with a white spot on the tip of each apical areolet: hind-wings gray. Length of the body 3½ lines; of the wings 14 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

59. Leptocerus submacula.

Niger, tibiis tarsisque testaceis; alæ cinereæ, anticæ maculis tribus albidis, una basali, 2a subcostali, 3a postica.

Black, clothed with black hairs: palpi hairy: antennæ very slender, about thrice the length of the body; tibiæ and tarsi testaceous: wings gray; fore-wings sprinkled with whitish down, adorned with three whitish spots, one in the middle near the base, the second on the anterior or discal anastomosis, the third on the arculus; veins black. Length of the body 3½—4 lines; of the wings 10—12 lines.

a, b. River St. Lawrence. Presented by E. Doubleday, Esq.

60. LEPTOCERUS MENTIEUS.

Ferrugineus; antennæ nigræ albo annulatæ; tarsi albo cincti; alæ anticæ cinereo-fuscæ, ferrugineo-pubescentes, posticæ cinereæ.

Ferruginous, hairy: antennæ black, with a white ring on each joint: palpi slightly hairy: tarsi with white bands: wings gray; fore-wings with a brown tinge, clothed with ferruginous down; veins ferruginous. Length of the body 2½ lines; of the wings 9 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

61. LEPTOCERUS INCERTUS.

Obscure testaceus, aureo-pubescens, corpore subtus antennis pedibusque albidis, abdominis apice ferrugineo; alæ cinereæ, anticæ aureo-pubescentes.

Dark testaceous, clothed with gilded down and with a few black hairs, whitish beneath: palpi hairy: antennæ whitish, full thrice the length of the body: tip of the abdomen ferruginous: legs whitish: wings gray; fore-wings covered with gilded down. Length of the body 1¾ line; of the wings 5½ lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

62. LEPTOCERUS ALBIDUS.

Fuscus, albo-hirtus; antennæ basi albo annulatæ; palpi testacei; pedes albidi; alæ albidæ, venis testaceis.

Brown, clothed with white hairs: antennæ about four times the length of the body, with white rings on the joints towards the base: palpi testaceous: legs whitish: wings whitish, with testaceous veins. Length of the body 3¼ lines; of the wings 12 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

63. LEPTOCERUS INCONSPICUUS.

Ferrugineus; abdomine nigricante; palpis pedibusque testaceis; alæ cinereæ, testaceo-pubescentes.

Ferruginous, with pale hairs: palpi testaceous, slightly hairy: antennæ about thrice the length of the body, testaceous at the base:

abdomen blackish: legs testaceous: wings slightly gray, covered with testaceous down; veins pale. Length of the body 2½ lines; of the wings 9—11 lines.

a—c. Georgia. From Mr. Abbot's collection.

64. LEPTOCERUS IGNITUS.

Testaceus; antennæ albidæ fulvo annulatæ; pedes albidi; alæ albidæ, iridescentes, anticæ testaceo-pilosæ, maculis duabus posticis nigris.

Testaceous: palpi slightly hairy: antennæ whitish, more than four times the length of the body, with a tawny ring on each joint: legs whitish: wings whitish, iridescent, deeply fringed; fore-wings clothed with testaceous hairs, and having two black spots on the hind border. Length of the body 2¼ lines; of the wings 8 lines.

a, b. Georgia. From Mr. Abbot's collection.

65. LEPTOCERUS EXQUISITUS.

Testaceus, albo-hirtus; antennæ articulis basi albis; pedes albi; alæ albæ, anticæ testaceo fasciatæ maculisque quatuor apud marginem posticum nigris.

Pale testaceous, clothed with white hairs: joints of the antennæ white towards the base; those towards the tip wholly testaceous; sutures brown: legs and wings white: fore-wings with five pale testaceous bands, the outer ones irregular; nearer the tip are some streaks composed of blackish hairs, and at the tip there are some pale testaceous marks or interrupted bands; five black spots furnished with long black hairs in a row on the hind border near the tip; veins white. Length of the body 2¼ lines; of the wings 7½ lines.

a. Georgia. From Mr. Abbot's collection.

66. LEPTOCERUS INDICUS.

Testaceus, albo-hirtus; antennæ articulis albo cinctis; alæ anticæ fusco conspersæ, posticæ albidæ.

Testaceous, clothed with white hairs: head partly clothed with brownish hairs: joints of the antennæ with white bands: fore-wings with minute patches of brown hairs which are most prevalent and partly confluent towards the tips; veins pale: hind-wings whitish. Length of the body 4½ lines; of the wings 15 lines.

a. North Bengal. From Miss Campbell's collection.

67. Leptocerus cephalotes.

Ferrugineus, subtus testaceus; caput latum; antennæ testaceæ, nigro annulatæ; pedes testacei; alæ subhyalinæ, venis testaceis.

Ferruginous, testaceous beneath: head broader than the thorax: palpi slightly hairy: antennæ testaceous, more than four times the length of the body, with a black ring on each joint: thorax with three brownish stripes: legs testaceous: wings subhyaline; veins testaceous. Length of the body 3¼ lines; of the wings 14 lines.

a. New Zealand. Presented by Dr. Sinclair.

The wings of the specimen described are much rubbed.

68. Leptocerus oppositus.

Ferrugineus, subtus nigricans; antennis pedibusque testaceis; alæ cinereæ, fusco-pubescentes.

Ferruginous, blackish beneath, clothed with pale hairs: antennæ pale testaceous, almost whitish, full thrice the length of the body: legs testaceous: wings gray, slightly clothed with pale brown down; veins pale. Length of the body 2½—3 lines; of the wings 10—11 lines.

a. Van Dieman's Land. From Dr. Hooker's sale.

69. Leptocerus magnus.

Ferrugineus, cano-hirtus; antennæ nigræ, longissimæ, articulis apice albis; palpi nigri; pedes testacei; alæ anticæ cervinæ, posticæ subcinereæ.

Ferruginous, clothed with hoary hairs: palpi black, rather hairy: antennæ black, more than five times the length of the body, ferruginous at the base; tips of the joints white: abdomen at the base beneath and legs testaceous: fore-wings fawn-colour, with darker veins: hind-wings slightly gray. Length of the body 4—5 lines; of the wings 15—19 lines.

a—d. Van Dieman's Land. From Dr. Hooker's collection.
e. Van Dieman's Land. Presented by R. Butler, Esq.

70. LEPTOCERUS ? MACULATUS.

Ferrugineus ; antennis nigro flavoque variis ; pectoris lateribus et abdomine nigricantibus ; pedibus flavicantibus ; alis anticis fusco et hyalino variis, maculis aliquot ad marginem anticum fulvis, alis posticis pellucidis immaculatis. Long. 5½ ; alar. 16 lin.

Phryganea maculata, *Perty, Delect. Anim. Artic.* 129, Pl. 25, f. 16.
St. Paul, Brazil.

Genus 5. MACRONEMA.

Palpi maxillares in utroque sexu conformes 5-articulati, nudi vel breve pilosi, articulo ultimo longissimo filiformi : antennæ quam alas duplo vel triplo longiores : alæ spatulatæ, apice rotundatæ.

Macronema, *Pictet, Mém. Soc. Phys. et Hist. Nat. Genève*, vii. *Ramb. Hist Nat. Ins. Neur.* 507.
Macronemum, *Burm.*

1. MACRONEMA SPECIOSA.

Fulvo-testacea ; antennæ annulatæ ; alæ anticæ fusco-pilosæ, fascia media et altera ante apicem e maculis congesta nigra, areolis apicalibus apice fusco-nigris.

Macronemum speciosum, *Burm. Handb. Ent.* ii. 2, 916, 1.
Brazil.

2. MACRONEMA LINEATA.

Fulvo-testacea ; antennæ annulatæ ; alæ fascia post medium argentata, apice aurantiaco.

Macronema lineata, *Pictet, Mém. Soc. Phys. et Hist. Nat. Gen.* vii.
Macronemum lineatum, *Burm. Handb. Ent.* ii. 2, 916, 2.
Brazil.

3. Macronema hyalina.

Fusco-nigra; antennis articulo 1o femoribus tarsisque testaceis; alæ anticæ fuscæ maculis quinque hyalinis, posticæ hyalinæ margine apicali fusco.

Macronema hyalina, *Pict. Mém. Soc. Phys. et Hist. Nat. Gen.* vii.
Macronemum hyalinum, *Burm. Handb. Ent.* ii. 2, 916, 3.
Brazil.

4. Macronema auripenne.

Macronema auripenne, *Ramb. Hist. Nat. Ins. Neur.* 507, 2.
Brazil.

5. Macronema rubiginosa.

Nigricans, subtus flavescens; antennis longis fuscis; pedibus pallidis; alis anticis ferrugineo-fuscis semihyalinis apice obscurioribus, posticis pallidioribus.

Macronema rubiginosa, *Guér. Icon. Règne Anim. Texte*, 395.
Brazil.

6. Macronema ocudata.

Testacea; caput thoracisque dorsum ferruginea, nigro vittata; antennæ nigro annulatæ; alæ anticæ purpureæ, ad costam testaceæ, apice fuscæ, macula magna rotunda postica ante apicali hyalina; alæ posticæ viridi-purpureæ.

Testaceous: head and thorax above ferruginous, the former with two black stripes, the latter with a black disk: antennæ more than four times the length of the body; joints with black bands; fore-wings purple with gilded down, testaceous along the fore border; tips brown, with a large round hyaline spot on the hind border: hind-wings purple, partly green. Length of the body 4 lines; of the wings 12 lines.

a—c. Venezuela. From Mr. Dyson's collection.

7. Macronema cuprea.

Nigra; palpis pectore pedibusque fulvis; alæ nigricantes, anticæ supra cupreæ, posticæ ad costam fulvæ.

Black, covered with coppery down: antennæ about four times the length of the body: palpi, breast, legs and hind borders of the abdominal segments tawny: wings blackish; fore-wings covered above with bright coppery down; hind-wings tawny along the fore border. Length of the body 4½ lines; of the wings 16 lines.

a. Brazil. Presented by J. P. G. Smith, Esq.

8. Macronema fastosa.

Lutea; antennæ nigræ; alæ anticæ nigro bifasciatæ apice cinereæ, posticæ apice nigræ.

Mystacida fastosa, *Brit. Mus. MSS.*

Pale luteous: antennæ black, luteous at the base, about thrice the length of the body: fore-tibiæ and fore-tarsi black; fore-tibiæ with two very short apical spurs: posterior tibiæ with two pair of long spurs; middle tibiæ with one pair above the middle; hind-tibiæ deeply fringed, with one pair at three-fourths of the length: fore-wings with two black bands, one before the middle, the other irregular and slightly curved near the tips, which are gray: hind-wings paler with blackish tips. Length of the body 5 lines; of the wings 15 lines.

a. Hong Kong, China. Presented by J. Bowring, Esq.

9. Macronema albovirens.

Viridi-alba; antennis palpisque testaceis, illis fusco annulatis et terminatis.

Whitish, with a slight green tinge: palpi testaceous: antennæ testaceous, with a brown ring on each joint, and wholly brown towards the tips, more than thrice the length of the body: tarsi testaceous: veins of the wings greenish. Length of the body 3—4 lines; of the wings 12—16 lines.

a—e. Venezuela. From Mr. Dyson's collection.
f. ——— ? From Mr. Children's collection.

10. Macronema scripta.

Macronema scriptum, *Ramb. Hist. Nat. Ins. Neur.* 507, 1.
Madagascar.

11. MACRONEMA CAPENSIS.

Testacea; antennæ nigræ; abdomen nigricans; alæ subcinereæ.

Testaceous, slightly pubescent: eyes black: antennæ black, about thrice the length of the body, tawny at the base: abdomen blackish; hind borders of the segments and tip testaceous: fore-tibiæ with a pair of short apical spurs; hinder tibiæ with two pairs of long spurs: wings very slightly gray; veins testaceous. Length of the body 4 lines; of the wings 12 lines.

a. Port Natal. From M. Gueinzius' collection.

12. MACRONEMA SIGNATA.

Fulva; antennæ nigræ; alæ anticæ testaceæ, fasciis duabus una furcata fuscis, apice cinereæ.

Tawny, almost without hairs: antennæ black, tawny at the base: legs testaceous; fore-tibiæ with a pair of very short spurs at the tips: hinder tibiæ with two pair of long spurs, one in the middle, the other at the tips: fore-wings testaceous, gray towards the tips, with two brown bands, one before the middle, oblique, the other nearer the tip, forked towards the fore border: hind-wings slightly gray. Length of the body 3 lines; of the wings 9 lines.

a, *b*. Sierra Leone. Presented by the Rev. D. F. Morgan.

13. MACRONEMA INSCRIPTA.

Testacea; antennæ nigræ; alæ hyalinæ, anticæ fasciis duabus fuscis unaque cinerea.

Testaceous, almost without hairs: antennæ black, testaceous at the base: wings colourless; veins testaceous; fore-wings with an oblique brown band about the middle, with a semicircular brown band beyond the middle, and with an irregular pale gray band near the tip. Length of the body 3½ lines; of the wings 11 lines.

a, *b*. Sierra Leone. Presented by the Rev. D. F. Morgan.

14. MACRONEMA PULCHERRIMA.

Testacea; antennæ nigræ; alæ hyalinæ, anticæ testaceo vittatæ strigis nonnullis obliquis fuscis.

Testaceous, almost without hairs: antennæ black, testaceous at the base: wings colourless, with stripes of gilded down about the

veins, and with some oblique dark brown streaks, one of them forming a curved band across the wing. Length of the body 2½ lines; of the wings 7 lines.

a. Sierra Leone. Presented by the Rev. D. F. Morgan.

Note.—The three preceding species are very nearly allied to each other.

15. MACRONEMA? APICALIS.

Testacea; thoracis dorsum nigrum; alæ apice nigricantes.

Testaceous: head wanting: disk of the thorax black, clothed with testaceous hairs: wings clothed with testaceous down, and towards the tips with black down; hind-wings very iridescent. Length of the body 3 lines; of the wings 10 lines.

a. Venezuela. From Mr. Dyson's collection.

Genus 6. LEPTONEMA.

Corpus elongatum. Palpi maxillares 5-articulati; articulus 1us brevis; 2us 1o duplo longior; 3us 2o paullo brevior et crassior; 4us validus, 1i ongitudine; 5us gracilior, præcedentibus conjunctis longitudine. Palpi labialis triarticulati; articuli 1us et 2us sat longi, æquales; 3us gracilior 1o et 2o conjunctim longior.

Leptonema, *Guérin, Icon. Règne Anim. Texte*, 396.

1. LEPTONEMA PALLIDA.

Pallide flava; antennis fusco annulatis; alis cinero-flavis semihyalinis.

Leptonema pallida, *Guér. Icon. Règne Anim. Texte*, 396.

Brazil.

Genus 7. POLYMORPHANISUS, m.

Palpi brevissimi: antennæ setaceæ, longissimæ, gracillimæ: tibiæ apice brevi-calcaratæ; tarsi dilatati: alæ anticæ nudæ venulis transversis nonnullis apud areolam costalem.

This genus seems to indicate an affinity between the Planipennides and the Phryganides. Head with a triangular compartment

between the eyes, very convex beneath: palpi extremely short: antennæ very long and slender; joints cylindrical: eyes small: legs pubescent; posterior legs comparatively short; tips of the tibiæ armed with two very little spurs; joints of the tarsi dilated, rather short: fore-wings quite bare, semifusiform towards the tips; costal areolet intersected by several rather indistinct transverse veinlets; subcostal areolet and discoidal areolet very narrow, the latter subdivided longitudinally; apical areolets very long; first divided near its base by a transverse vein which encloses a subquadrate areolet; second and fifth very broad; third narrow; fourth moderately broad; subapical areolets long; areolet of the thyridium divided by a very oblique transverse vein which joins the thyriferous branch of the radius at the thyridium; cell of the thyridium divided by a transverse veinlet.

1. POLYMORPHANISUS NIGRICORNIS.

Testaceus; antennæ nigræ; alæ albidæ, venis viridibus.

Testaceous, clothed with pale hairs: antennæ black, about thrice the length of the body, tawny at the base; first joint short, thick: tips of the tibiæ black above; tips of the tarsi black, fringed with black hairs; claws black: wings whitish; veins pale green. Length of the body 6½ lines; of the wings 23 lines.

a. North India. From Mr. Stevens' collection.

Genus 8. ASCALAPHOMERUS, m.

Palpi hirsutissimi: oculi maris maximi, connexi: antennæ longæ, extrorsum crassiores, apice recurvæ.

This genus has a slight resemblance to Ascalaphus. Eyes of the male very large, connected above: maxillary palpi very hairy: antennæ long, slender, but slightly increasing in thickness from the base to the tips, towards which they are recurved and have transverse joints: tibiæ with two apical spurs; fore-tibiæ rather short; posterior tibiæ with two spurs at two-thirds of the length: fore-wings pubescent; apical areolets very long; cell of the thyridium triangular, rather short, very broad towards the tip, a little nearer to the fore border than to the hind border of the wing; interclaval areolet and cubital areolet unusually broad.

1. ASCALAPHOMERUS HUMERALIS.

Niger, hirtus; antennæ corpore duplo longiores; thoracis latera antica rufo-hirta.

Black, thickly clothed with black hairs: eyes red: antennæ full twice the length of the body, hairy at the base: thorax with a tuft of bright red hairs on each shoulder: legs hairy; posterior thighs and tibiæ partly clothed with hoary hairs: wings blackish; fore-wings thinly covered with black down, slightly angular on the hind border, semifusiform towards the tips; veins black. Length of the body 6 lines; of the wings 22 lines.

a. Northern China. From Mr. Fortune's collection.

Fam. 3. PSYCHOMIDÆ.

Antennæ setaceæ. Alæ posticæ non plicatæ. Pedes calcarati.

Psychomidæ, *Curt. Steph. Ill. Brit. Ent. Mand.* vi. 190.
Psychomides, *Westw. Intr. Ent.* ii. 50.
Psychomioidæ, *Agassiz.*

Genus 1. CHIMARRA.

Palpi maxillares longissimi; articuli 2us et 3us elongati, validi; 4us gracilis.

Chimarra, *Leach; Curt. Brit. Ent.* 561; *Steph. Ill. Brit. Ent. Mand.* vi. 190.
Phryganea p., *Linn.*
Chimarrha, *Burm.; Ramb.*

1. CHIMARRA MARGINATA.

Fusco-nigra; alarum costa, margine postica et alarum anticarum lineis nonnullis ochruceo-flavis. Long. 4—5; alar. 6—9 lin.

Phryganea marginata, *Linn. Syst. Nat.* ii. 910. *Fabr. Sp. Ins.* ii. 390, 16. *Mant. Ins.* i. 246. *Ent. Syst.* ii. 79, 22. *Gmel. Ed. Syst. Nat.* i. 5, 2634, 14.
Chimarra marginata, *Leach. Curt. Brit. Ent.* xii. 561. *Steph. Ill. Brit. Ent. Mand.* vi. 191, 1.

Chimarrha marginata, *Burm. Handb. Ent.* ii. 910. *Ramb. Hist. Nat. Ins. Neur.* 498.

a—d. England.
e. ———? From Mr. Children's collection.

2. CHIMARRA MORIO.

Tota atra, opaca, pilosa.

Chimarrha Morio, *Burm. Handb. Ent.* ii. 2, 911, 2.

Brazil.

Genus 2. PSYCHOMIA.

Palpi maxillares 5-articulati, articulo 5o elongato filiformi. Antennæ mediocres, setaceæ. Alæ anticæ angustæ, acuminatæ, venis transversis nullis; alæ posticæ anticis similes, non plicatæ.

Psychomia, *Latr.*; *Pictet, Rech. Phryg.* 222; *Ramb.*
Isopalpoidea p., *Kolenati.* (*Palpi maxillares in utroque sexu conformes, 5-articulati*).

1. PSYCHOMIA ANNULICORNIS.

Fusca; antennæ fusco fulvoque annulatæ; thorax subtus pedesque fulvi; alæ anticæ iridescentes, posticæ cinereæ. Long. 2½ lin.

Psychomia annulicornis, *Pictet, Rech. Phryg.* 222, 1, pl. 20, f. 7. *Ramb. Hist. Nat. Ins. Neur.* 500, 1.

Geneva.

2. PSYCHOMIA ACUTA.

Fulva; antennæ subannulatæ; alæ fulvo-cinereæ, elongatæ, acuminatæ, iridescentes. Long. 3. lin.

Psychomia acuta, *Pictet, Rech. Phryg.* 223, 2, pl. 20, f. 8.

Geneva.

3. PSYCHOMIA TENUIS.

Fulva; palpi fuscescentes; antennæ basi subannulatæ, apice nigricantes; mesothorax punctis nonnullis nigris. Long. 3 lin.

Psychomia tenuis, *Pictet, Rech. Phryg.* 223, 3, pl. 20, f. 9.

Geneva.

Fam. 4. SERICOSTOMIDÆ.

Palpi maxillares maris articulis 4, fœm. 5, pilis simplicibus, densis et longis obtecti, articulo 2o elongato, 3o brevi, ovato. Calcaria tibiarum obtusa et mobilia. Alæ anticæ longe fimbriatæ, radio subcostali recto, facie inferiori etiam pilosa, venis transversis vix ullis. Alæ posticæ plicatæ, quoad colorem alis anticis magis æquales, pilosæ, foro cubitali nunquam dilatato, potius angustato.

Larvæ corpus cylindricum, infra sensim angustius aut oblongo-ovale: caput orbiculare aut transversum: prothorax solus corneus, semilunaris, transversus, antice caput amplectens; pedes fere æquales, breves: abdomen segmentis minus solutis, appendicibus analibus brevibus, hamis bidentatis: branchiæ simplices, brevissimæ, basi inter se connatæ, radiatæ, aut nullæ. Theca fere semper ex arena aut lapillis, intus neto subserta, depressa aut conica. Pupa cylindrica, recens flava, serius rufa, ore cucullato, appendicibus aut nullis, eorum loco setulis accumulatis, aut appendicibus tribus.

Seriocostomidæ, *Steph. Ill. Brit. Ent. Mand.* vi. 180.
Sericostomides, *Westw. Intr. Ent.* ii. 50.
Phryganeidæ p., *Burm. Handb. Ent.* ii. 2, 922.
Sericostomoidea p., *Kol. Gen. et Sp. Trich.* 88.

Genus 1. POTAMARIA.

Tibiæ anticæ non calcaratæ.

Potamaria, *Leach, MSS. Steph. Ill. Brit. Ent. Mand.* vi. 182.
Phryganea p., *Fabr.*
Trichostoma? *Pictet.*

1. Potamaria analis.

Nigra; alæ fuscæ, anticæ macula anali alba nebulaque basali albida. Long. 4½—6; alar. 13—15 lin.

Phryganea analis, *Fabr. Ent. Syst.* ii. 75.
Potamaria analis, *Steph. Ill. Brit. Ent. Mand.* vi. 183, 1, pl. 34, f. 4.

a, *b*. England.

2. POTAMARIA ASSIMILIS.

Nigra; tibiæ tarsique obscure ochracei; alæ fuscæ immaculatæ, anticæ cupreo-tinctæ. Long. 4—5; alar. 13—14 lin.

Potamaria assimilis, *Steph. Ill. Brit. Ent. Mand.* vi. 183, 2.

England.

3. POTAMARIA HYALINA.

Nigra; palpi, tibiæ tarsique ochracea; antennæ graciles, fuscæ; alæ subhyalinæ, pallide fuscescentes, immaculatæ. Long. 4½; alar. 14 lin.

Potamaria hyalina, *Steph. Ill. Brit. Ent. Mand.* vi. 183, 3.

England.

4. POTAMARIA NIGRA.

Nigra, nigro-pilosa; abdominis segmentis apice tarsis basi tibiisque ferrugineis; alæ nigricantes.

Phryganea nigra, *Barnston, MSS.*

Black, clothed with black hairs above, with some tawny hairs beneath: antennæ rather short, much longer than the body: breast tinged with gray: hind borders of abdominal segments, tarsi at the base and tibiæ ferruginous: wings blackish with black hairs. Length of the body 2¼ lines; of the wings 7½ lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

Genus 2. SERICOSTOMA.

Palpi maxillares maris lati, crassi, hirsutissimi, sursum flexi et fronti adpressi, personati: tibiæ anticæ et intermediæ bicalcaratæ, posticæ quadricalcaratæ: alæ anticæ radio subcostali in sectore apicali 1o in anastomosi, areola basali una; areola apicalis 1a areolæ discalis basim non attingens; alæ posticæ anastomosi antica inter sectorem apicalem 2um et 3um interrupta, exinde areola discali nulla; anastomosis postica distincta.

Sericostoma, *Latr. Fam. Nat.* 439; *Curt.*; *Steph.*; *Westw.*; *Pictet*; *Schneider.*

Phryganea p., *Deg.*; *De Vill.*; *Oliv.*; *Schr.*; *Zett.*
Prosoponia, *Leach*; *Kol. Gen. et Sp. Trich.* 88, pl. 2, f. 18.

1. SERICOSTOMA COLLARIS.

Fusco-nigrum; antennæ fuscæ, basi punctoque verticis aurantiaco-ochraceis; alæ anticæ sericeo-testaceæ, aureo tinctæ. Long. 4—5; alar. 10—14 lin.

Phrygranea collaris, *Schr. Ins. Austr.* 615. *Deg. Ins.* ii. pl. 15, f. 19. *De Vill. Ent. Linn.* iii. 42, 51. *Oliv. Enc. Méth.* 556, 7.
Sericostoma collaris, *Pictet, Rech. Phryg.* 176, 1, pl. 14, f. 1.
Sericostoma Spencii, *Steph. Ill. Brit. Ent. Mand.* vi. 33, f. 2.
Sericostomum collare, *Burm. Handb. Ent.* ii. 2, 928, 2. *Ramb. Hist. Nat. Ins. Neur.* 496, 4.
Phryganea personata, *Spence, Intr. Ent.* iii. 489.
Prosoponia Spencii, *Kirby, Intr. Ent.* (4th edit.), 111, 488.
Phryganea chrysocephala, *Zett. Iter. Lapp.* 1832, 103. *Ins. Lapp.* 1070, 42.
Prosoponia collaris, *Kol. Gen. et Sp. Trich.* 90, 3.
Sericostoma Latreillii, *Curt. Phil. Mag.* iv. 214.
Sericostoma Spencii, *Steph. Ill. Brit. Ent. Mand* vi. 184, 1, pl. 38, f. 2.

a—d. England.
e—i. Dartmoor, England. From Dr. Leach's collection.

2. SERICOSTOMA SCHNEIDERII.

Nigrum; palpis maxillaribus cochleiformibus capiti adpressis; occipite thoraceque nigro-hirtis; antennis crassis flavis basi obscurioribus; alis anticis densissime obscure cupreo-pilosis; pedibus flavis, femoribus infuscatis. Long. cum alis 6 lin.

Sericostoma flavicorne, *Schneider, Ent. Zeit. Stett.* vi. 155, 10.
Prosoponia Schneiderii, *Kol. Gen. et Sp. Trich.* 89, 1.

Dalmatia.

3. SERICOSTOMA MULTIGUTTATUM.

Caput unicolor; antennæ luteæ.

Sericostoma multiguttatum, *Pictet, Rech. Phryg.* 178, 2, pl. 14, f. 2. *Ramb. Hist. Nat. Ins. Neur.* 496, 2.
Prosponia multiguttata, *Kolenati, Gen. et Sp. Trich.* 90, 2.

Germany; Geneva.

4. SERICOSTOMA GALEATUM.

Fusco-fulvum ; thorax et abdomen nigra.

Sericostoma galeatum, *Ramb. Hist. Nat. Ins. Neur.* 495, 1.

South France.

5. SERICOSTOMA LATREILLII.

S. multiguttato *simillimum ; alæ fulvo-fuscæ, fasciis tribus indistinctis.*

Sericostoma Latreillii, *Gené, MSS. Ramb. Hist. Nat. Ins. Neur.* 496, 3.

South France, Sardinia.

6. SERICOSTOMA VITTATUM.

Sericostoma vittatum, *Ramb. Hist. Nat. Ins. Neur.* 497, 5.

Sierra Nevada, South Spain.

7. SERICOSTOMA FESTIVUM.

Sericostoma festivum, *Ramb. Hist. Nat. Ins. Neur.* 497, 5.

Madrid.

8. SERICOSTOMA AMERICANUM.

Nigrum, hirtum ; pedes picei ; alæ nigro-fuscæ, anticæ plus triente posticis longiores.

Black, clothed with black hairs : antennæ about twice the length of the body ; joints long, cylindrical : legs pitchy : wings dark brown, hairy ; fore-wings almost fusiform, more than one-third longer than the hind-wings. Length of the body 3 lines ; of the wings 16 lines.

a, b. Georgia. From Mr. Abbot's collection.

Genus 3. BRACHYCENTRUS.

Antennæ remotæ. Tibiæ anticæ bicalcaratæ; intermediæ et posticæ quadricalcaratæ; calcares breves.

Brachycentrus, *Curt. Phil. Mag.* iv. 215; *Steph. Ill. Brit. Ent. Mand.* vi. 181.

Trichostoma? *Pictet, Rech. Phryg.* 172. "Maris palpi maxillares triarticulati, articulo 3o clavato. Antennæ breves, robustæ, articulo 1o crasso hirto. Alæ anticæ breves, venis transversis nullis. Alæ posticæ vix plicatæ."

Trichostomum p., *Burm.*

Pogonostoma, *Rambur.*

Hydronautia, *Kolenati.*

"Alæ posticæ absque anastomosi postica, cubito bipartito, areolis apicalibus tribus, areola discoidali nulla, alarum anticarum ramo subcostali prope parastigma flexo, radio thyrifero cum cubito antico in anastomosi, areola apicali prima reliquis non longiori: palpis maxillaribus maris hirsutissimis et fronti adpressis, minus incrassatis: tibiæ anticæ bicalcaratæ, intermediæ et posticæ tricalcaratæ."

1. Brachycentrus maculatus.

Cinereus; capite vertice, thorace, palpisque longius pilosis; tibiis tarsisque testaceis; alis anticis fuscis luteo-pubescentibus, maculis pallide flavescentibus, quarum duæ in margine principali, septem vel octo ad marginem apicalem et in areolis reliquis complures, alis posticis fuscis fusco-pilosis et fimbriatis.

Phrygranea maculata, *Oliv. Enc. Méth.* 543, 17. *Réaum. Ins.* iii. pl. 13, f. 13? *Geoffr. Ins.* ii. 248, 6. *Fourcroy, Ent. Par.* ii. 355, 6. *Latr. Hist. Nat. Ins.* xiii. 89, 13.

Sericostoma maculatum, *Pictet, Rech. Phryg.* 180, 5, pl. 14, f. 4.

Trichostomum maculatum, *Burm. Handb. Ent.* ii. 2, 925, 1.

Phrygranea tincta, *Zett. Ins. Lapp.* 1071, 44.

Hydronautia maculata, *Kol. Gen. et Sp. Trich.* 93, 1.

Pogonostoma vernum, *Ramb. Hist. Nat. Ins. Neur.* 490.

Europe.

2. Brachycentrus subnubilus.

Niger; tibiæ tarsique ochracea; alæ fuscescentes, venis piceis, anticæ flavescente-subnebulosæ. Long. 2½—3½; alar. 8½—12 lin.

Brachycentrus maculatus var.?
Brachycentrus subnubilus, *Curt. Phil. Mag.* iv. 215. *Steph. Ill. Brit. Ent. Mand.* vi. 182, 1.

a. England.

3. Brachycentrus concolor.

Ater; tibiæ tarsique ochraceo-fusca; alæ fuscescentes, immaculatæ, venis piceis. Long. 2⅓; alar. 8 lin.

Brachycentrus concolor, *Steph. Ill. Brit. Ent. Mand.* vi. 182, 2.

England.

4. Brachycentrus costalis.

Ater; femora fusca; tibiæ tarsique fusco-ochracea; alæ fuscescentes, immaculatæ, costa stigmateque fuscis, venis piceis. Long. 2½; alar. 8 lin.

Brachycentrus costalis, *Steph. Ill. Brit. Ent. Mand.* vi. 182, 3.

England.

5. Brachycentrus albicans.

Nigro-fuscus; capite et thorace albo-hirsutis; antennis albidis; tibiis tarsisque albido-testaceis; alis fusco-testaceis, pube densa albido-flava depressa tectis, fimbriis albidis.

Phrygranea albicans, *Zett. Ins. Lapp.* 1071, 46.
Hydronautia albicans, *Kol. Gen. et Sp. Trich.* 93, 2.

North Europe.

6. Brachycentrus crepuscularis.

Niger, luteo-hirtus; antennis, abdominis segmentis apice, pedibusque testaceis; alæ cinereæ, anticæ testaceo-pubescentes.

Phryganea crepuscularis, *Barnston, MSS.*

Black, clothed with luteous hairs: antennæ testaceous, with an indistinct ring of a darker colour on each joint, black towards the tips: abdomen testaceous along the hind border of each segment and at the tip: legs testaceous: wings gray; fore-wings thickly covered with testaceous down; veins tawny. Length of the body 2½ lines; of the wings 8 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

7. BRACHYCENTRUS FULIGINOSUS.

Niger, cano-hirtus; abdominis segmentis apice pedibusque testaceis; antennæ ferrugineæ; palpi testacei, apice nigricantes; alæ anticæ fusco-cinereæ, posticæ cinereæ.

Phryganea fuliginosa, *Barnston, MSS.*

Black, tinged with gray, clothed with hoary hairs: antennæ ferruginous, longer than the body: palpi testaceous, with blackish tips: hind borders of the abdominal segments and legs testaceous: fore-wings brownish gray, with pale down; veins ferruginous: hind-wings gray. Length of the body 4 lines; of the wings 12 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

Genus 4. LASIOSTOMA.

"Calcares æquales. Tibiæ et tarsi spinosa. Alæ anticæ anastomosi antica et postica valde flexa, a se non remotis, areola apicali quinta anastomosim non attingente, area interclavali ad anastomosim dilatata, spathulæformi; alæ posticæ anastomosi antica incompleta, areola discali non clausa, areola apicali quinta anastomosim non attingente, cubito et costula sequenti bipartitis, ad basim inter se anastomosi junctis."

Lasiostoma, *Ramb. Hist. Nat. Neur.* 492.
Spathidopteryx, *Kolenati, Gen. et Sp. Trich.* 95, 21, pl. 2, f. 23.

1. LASIOSTOMA CAPILLATUM.

Fusco-cinereum; caput et alæ fulva; antennæ et pedes flava. Long. alar. 9 lin.

Trichostoma capillatum, *Pictet, Rech. Hist. Phryg.* 173, 1, pl. 13, f. 8.
Trichostomum capillatum, *Burm. Handb. Ent.* ii. 2, 926, 3.
Trichostomum auratum, *Burm. Handb. Ent.* ii. 2, 926, 4. *Fuscus; capite, dorso, alisque anticis densissime fulvo-hirtis, pilis auratis longioribus; tibiis tarsisque testaceis.*
Spathidopteryx capillata, *Kol. Gen. et Sp. Trich.* 95, 1.
Lasiostoma fulvum, *Ramb. Hist. Nat. Ins. Neur.* 492.

Europe.

Genus 5. ASPATHERIUM.

" Tibiæ anticæ bicalcaratæ, intermediæ et posticæ quadricalcaratæ, calcaribus æqualibus; tibiæ et tarsi parce spinulosa. Alæ anticæ anastomosi antica a postica valde remota, areola interclavali ad apicem alæ triangula, non spathulæformi; alæ posticæ anastomosi antica completa, areola discali clausa, triangulari, anastomosi postica nulla, cubito et costulis duabus bipartitis, reliquis simplicibus."

Trichostoma p., *Pictet.*
Aspatherium, *Kol. Gen. et Sp. Trich.* 96, 23, pl. 2, f. 24.

1. Aspatherium fuscicorne.

Fuscum; capite, antennis, dorso, alisque anticis fusco-ochraceo hirtis et pilosis; antennis apice infuscatis; alis posticis fusco-pilosis; femoribus basi fuscis; tibiis tarsisque testaceis.

Trichostoma fuscicorne, *Pictet, Rech. Phryg.* 174, 3, pl. 13, f. 10.
Aspatherium fuscicorne, *Kol. Gen. et Sp. Trich.* 97, 1.
Europe.

2. Aspatherium picicorne.

Nigro-fuscum; capite, thorace, et antennarum articulo 1o *cinereo-hirtis; femoribus cinereo-fuscis; tibiis tarsisque testaceis; alis anticis fuscis, fusco-luteo pilosis, apice fusco-fimbriatis, posticis fuscis, fusco pilosis et fimbriatis.*

Trichostoma picicorne, *Pictet, Rech. Phryg.* 174, 2, pl. 13, f. 9.
Ramb. Hist. Nat. Ins. Neur. 491, 1.
Aspatherium picicorne, *Kol. Gen. et Sp. Trich.* 97, 2.
Trichostoma rufescens, var.? *Ramb. Hist. Nat. Ins. Neur.* 492, 2.
Europe.

Genus 6. NOTIDOBIA.

" Palpi maxillares maris non incrassati, nec personati. Tibiæ anteriores bicalcaratæ, posticæ quadricalcaratæ. Alæ anticæ radio subcostali cum sectore apicali 1o in anastomosi, areola basali una, areola apicalis 1a areolæ discoidalis basim attingens; alæ posticæ areola discoidali clausa, distincta, anastomosis postica adest."

Phryganea p., *Linn.; Billbg.; Fabr.; Latr.; Zett.*
Sericostoma p., *Latr.; Pictet.*

Notidobia, *Steph. Ill. Brit. Ent. Mand.* vi. 185; *Kolen. Gen. et Sp. Trich.* 91.

1. NOTIDOBIA CILIARIS.

Atra, atro-pilosa; tibiis posterioribus tarsisque subtestaceis vel albicantibus; alis anticis subnitidis, longe atro-pilosis et pubescentibus, posticis atro-fuscis subopalinis fusco-pubescentibus et fimbriatis.

Phrygrania ciliaris, *Linn. Faun. Suec.* 1497, fœm. *Billbg. En. Ins.* 94. *Gmel. ed. Syst. Nat.* i. *Zett. Ins. Lapp.* 1070, 41.
Phrygranea atrata, *Fabr. Ent. Syst.* ii. 78, 17. *Coquebert, Illust. Icon. Déc.* i. 1, pl. 1, f. 6. *Latr. Hist. Nat.* xiii. 89, 12.
Sericostoma atratum, *Pictet, Rech. Phryg.* 178, 3, pl. 14, f. 5.
Sericostomum atratum, *Burm. Handb. Ent.* ii. 2, 927, 1. *Ramb. Hist. Nat. Ins. Neur.* 497, 7.
Notidobia ciliaris, *Kol. Gen. et Sp. Trich.* 91, 1.
Notidobia atrata, *Steph. Ill. Brit. Ent. Mand.* vi. 186, 1.

a, *b*. England.
c. Dartmoor. From Dr. Leach's collection.

2. NOTIDOBIA PYRALOIDES.

Fulvus, hirtus; antennæ testaceæ, basi fuscæ, corpore duplo longiores; pedes testacei; alæ fuscæ, anticæ latæ.

Tawny, clothed with tawny hairs: antennæ testaceous, slender, about twice the length of the body, joints long, cylindrical, brown, with testaceous tips towards the base; 1st joint stout, tawny: legs testaceous: wings deep brown, thickly clothed and fringed with hairs; fore-wings very broad; veins brown. Length of the body $3\frac{1}{2}$—4 lines; of the wings 10—12 lines.

a, *b*. Georgia. From Mr. Abbot's collection.

3. NOTIDOBIA LATIFASCIA.

Testaceus, hirtus; antennæ articulis fusco cinctis; alæ anticæ fascia lata obliqua fusca, posticæ cinereæ.

Testaceous, clothed with testaceous hairs: antennæ slender, longer than the body, or perhaps twice its length; each joint brown at the base; 1st joint stout: fore-wings with a broad oblique brown band beyond the middle; hind-wings gray. Length of the body $2\frac{1}{2}$ lines; of the wings 9 lines.

a. North America. Presented by the Entomological Club.

Genus 7. DIPSEUDOPSIS, n.

Notidobiæ affinis. Antennæ approximatæ; articulus 1us non elongatus: tibiæ anticæ tricalcaratæ; posteriores quadricalcaratæ.

Fem. Allied to *Notidobia*. Maxillary palpi stout; 4th joint slender; 5th very slender: antennæ stout, longer than the body; joints oblong: fore-shanks with one spur before the middle and 2 at the tips; middle shanks with 2 spurs before the middle and 2 at the tips; hind-shanks with 2 spurs beyond the middle and 2 at the tips: fore-wings long, elliptical towards the tips.

1. Dipseudopsis capensis.

Picea; antennis palpisque ferrugineis; pedibus fulvis; alæ anticæ fuscæ aureo-pubescentes, posticæ cinereæ.

Pitchy, slightly tinged with gray: antennæ and palpi ferruginous: legs tawny: fore-wings brown, thinly clothed with gilded down: hind-wings gray; veins testaceous. Length of the body 3½ lines; of the wings 10 lines.

a. Port Natal. From M. Gueinzius' collection.

Genus 8. MORMONIA.

Antennæ approximatæ, articulo 1o elongato hirsutissimo. Tibiæ anticæ bicalcaratæ; intermediæ quadricalcaratæ.

Mormonia, *Curt. Phil. Mag.* iv. 215; *Steph. Ill. Brit. Ent. Mand.* vi. 188.
Goëra p., *Burm.*; *Kol.*
Lepidostoma, *Rambur.*
Phryganea p., *Fabr.*; *Oliv.*; *De Vill.*; *Hummel.*
Goëra, *Hoffmansegg*; *Burm.*; *Kol. Gen. et Sp. Trich.* 98, 24, pl. 2, f. 21.

"Tibiæ anticæ bicalcaratæ; intermediæ et posticæ quadricalcaratæ, calcaribus æqualibus; tibiis absque spinis; tarsis spinulis minimis, adpressis: alarum anticarum anastomosi antica a postica valde remota, area interclavali ad apicem triangula, subcosta cum radio subcostali in anastomosi; alarum posticarum anastomosi antica completa, areola discoidali clausa, anastomosi postica nulla, cubito bipartito, costulis simplicibus tantum duabus."

1. Mormonia nigromaculata.

Obscure fusca; antennæ ochraceæ, fusco annulatæ; pedes ochracei; alæ fuscescentes, anticæ nigro irroratæ. Long. 2¾; alar. 9½ lin.

Mormonia nigromaculata, *Steph. Ill. Brit. Ent. Mand.* vi. 189, 1, pl. 32, f. 2.
Goëra hirta, *Kol. Gen. et Sp. Trich.* 99, 3.
Lepidostoma squamulosum, *Ramb. Hist. Nat. Ins. Neur.* 493.

Europe.

2. Mormonia hirta.

Obscure fusca; antennæ pallidæ, fusco annulatæ; pedes pallidi; alæ anticæ maculis duabus obscurioribus. Long. 3; alar. 9—10 lin.

Phryganea hirta, *Fabr. Ent. Syst.* ii. 80, 26. *De Vill. Ent.* iii. 40, 47. *Oliv. Enc. Méth.* 547, 31. *Hummel, Ess. Ent.* iv. 16. *Zett. Ins. Lapp.* 1069, 40.
Mormonia gracilicornis, *Curt. Phil. Mag.* iv. 215.
Mormonia hirta, *Steph. Ill. Brit. Ent. Mand.* vi. 189, 2.

a. ——— ? From Mr. Children's collection.

3. Mormonia immaculata.

Ochraceo-fusca; antennæ ochraceæ, fusco punctatæ; alæ anticæ pallide fuscæ, immaculatæ. Long. 2½—3¼; alar. 9—10 lin.

Mormonia maculicornis? *Curt. Phil. Mag.* iv. 215.
Mormonia immaculata, *Steph. Ill. Brit. Ent. Mand.* vi. 189, 3.
Goëra basalis? *Kol. Gen. et Sp. Trich.* 98, 1.
Goëra hirta? *Burm. Handb. Ent.* ii. 2, 924, 1.

England.

4. Mormonia minor.

Ochraceo-fusca; antennæ et pedes ochracea; alæ hyalinæ, iridescentes, immaculatæ. Long. 2; alar. 7 lin.

Mormonia minor, *Steph. Ill. Brit. Ent. Mand* vi. 189, 4.

England.

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5. MORMONIA VILLOSUM.

Lepidostoma villosum, *Ramb. Hist. Nat. Ins. Neur.* 494, 2.
France.

6. MORMONIA SERICEA.

Lepidostoma sericeum, *Ramb. Hist. Nat. Ins. Neur.* 494, 3.
France.

7. MORMONIA DALMATINA.

Antennæ simplices, fuscæ.

Goëra Dalmatina, *Kol. Gen. et Sp. Trich.* 99, 2.
Dalmatia.

Genus 9. SILO.

"Palpi maxillares maris divaricati. Antennæ setaceæ, approximatæ, articulo 1o elongato vix hirsuto Tibiæ non pinnatæ; anticæ bicalcaratæ, calcaribus brevibus; posteriores quadricalcaratæ. Alæ absque areola discali, anastomosibus omnibus incompletis, subcostali nulla."

Phryganea p., *Linn.; Fabr.; Zett.*
Trichostomum p., *Burm.*
Sericostomum p.? *Pictet.*
Athripsodes p., *Billberg.*
Silo, *Curtis; Steph. Ill. Brit. Ent. Mand.* vi. 186; *Kol. Gen. et Sp. Trich.* 101, 26, pl. 2, f. 26.

1. SILO MINUTUS.

Nigra; pedes pallide ochracei; alæ nigro-fuscæ, immaculatæ. Long. 4; alar. 9—11 lin.

Phryganea pallipes, *Fabr. Ent. Syst.* ii. 76.
Silo pallipes, *Steph. Ill. Brit. Ent. Mand.* vi. 186, 1.
Phrygranea minuta, *Linn. Faun. Suec.* 1591. *Fabr. Ent. Syst.* ii. 81, 32. *Zett. Ins. Lapp.* 1070, 43.
Phrygranea pallipes? *Fabr. Sp. Ins.* i. 388, 6; *Mant. Ins.* i. 245, 7; *Ent. Syst.* ii. 76, 7. *Gmel. Ed. Syst. Nat.* i. 5, 2636, 36.

Sericostoma minutum? *Pictet, Rech. Hist. Phryg.* 181, 6, pl. 14, f. 5, *d, e.*
Trichostomum pallipes, *Burm. Handb. Ent.* ii. 2, 926, 2.
Athripsodes minuta, *Billbg. Enum. Ins.* 94.
a. Dartmoor. From Dr. Leach's collection.

Genus 10. GOERA.

" Palpi maxillares maris recurvi. Antennæ approximatæ, articulo 1o elongato vix hirsuto. Tibiæ non spinosæ; anticæ bicalcaratæ; intermediæ quadricalcaratæ; calcares omnes æquales. Alæ absque anastomosi postica."

1. GOERA PILOSA.

Sericeo-ochraceæ; alæ anticæ subtestaceo-ochraceæ immaculatæ, posticæ subfuscentes. Long. 3½—5; alar. 9—11. lin.

Phryganea pilosa, *Fabr. Sp. Ins.* i. 388, 5; *Mant. Ins.* i. 245, 6; *Ent. Syst.* ii. 76. *Gmel. ed. Syst. Nat.* i. 5, 2635, 35.
Goëra pilosa, *Steph. Ill. Brit. Ent. Mand.* vi. 187, 1.
Europe.

2. GOERA FLAVIPES.

Sericeo-ochracea; thorax, abdomen, coxæ femoraque fusca. Long. 3½—5; alar. 10—12 lin.

Goëra flavipes, *Curt. Phil. Mag.* iv. 215. *Steph. Ill. Brit. Ent. Mand.* vi. 187, 2.
a—d. England.
e. ——— ? From Mr. Children's collection.

3. GOERA VULGATA.

Nigra; pedes ochraceo-flavi; alæ flavo-testaceæ immaculatæ. Long. 3½; alar. 10 lin.

Phryganea vulgata? *Olivier; Latr. Hist. Nat.* xiii. 91.
Goëra vulgata, *Steph. Ill. Brit. Ent. Mand.* vi. 188, 3.
England.

4. Goera irrorata.

Ochracea; antennæ piceæ, ochraceo subannulatæ; alæ anticæ subochraceæ, punctis plurimis indistinctis albidis. Long. —; alar. 7 lin.

Goëra irrorata, *Curt. Phil. Mag.* iv. 215. *Steph. Ill. Brit. Ent. Mand.* vi. 188, 4.

England.

5. Goera elegans.

Testacea, pilosa; antennæ nigro annulatæ, corpore triplo longiores; alæ cinereæ, anticæ testaceo-pubescentes.

Testaceous, clothed with testaceous hairs: antennæ full thrice the length of the body, with a black ring on each joint: wings gray; fore-wings thickly clothed with testaceous down. Length of the body 3 lines; of the wings 11 lines.

a. North America? Presented by the Entomological Club.

6. Goera indecisa.

Nigra, pilosa; antennæ corpore plus duplo longiores; pedes ferruginei; alæ nigricantes, anticæ fusco-pubescentes.

Black, clothed with black hairs: palpi clothed with hoary hairs; antennæ more than twice the length of the body: legs dull ferruginous: wings blackish; fore-wings clothed with dark brown down. Length of the body 3 lines; of the wings 10 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

Genus 11. ——— ?

"Antennæ ubique æquales, cylindricæ. Tibiæ non pinnatæ, anticæ bicalcaratæ, calcaribus brevissimis; posteriores quadricalcaratæ. Alæ anticæ et posticæ areola discali clausa; anastomosis antica completa, postica nulla; areola in alis posticis 4a apicalis et 2a subapicalis anastomosim non attingens."

Potamaria, *Kol. Gen. et Sp. Trich.* 99, 25.

1. ——— ? Pictetii.

Fusco-nigra, corpore nigro; antennis nigro-fuscis, articulo 1o capite et thorace ochracco-pilosis; femoribus tibiisque fusco-cinereis; genubus et tarsis testaceis; alis anticis fuscis subopalinis fusco-ochracco pilosis fusco fimbriatis, posticis fuscis subopalinis fusco-pilosis et fimbriatis.

Potamaria Pictetii, *Kol. Gen. et Sp. Trich.* 100, 1.

Trichostoma nigricorne? *Pictet, Rech. Hist. Phryg.* 175, 4, pl. 13, f. 11. *Nigrum; pedes flavi; alæ fuscæ, nitidæ.* Long. 7 lin.

Germany; Switzerland?

2. ——— ? Schmidtii.

Fusca, pubescens; capite et prothorace aureo-hirtis; ventre albido-cinereo; femoribus cinereis; tibiis testaceis, basi fuscis, anticis brevi-calcaratis; tarsis fuscis; alis anticis fuscis, pilosis, fusco-fimbriatis, macula discali magna et sutura aureo-pilosis; posticis fuscis, fusco-pilosis et fimbriatis, pulcherrime iridi-coloribus.

Potamaria Schmidtii, *Kol. Gen. et Sp. Trich.* 100, 2.

Carniolia.

Genus 12. DASYSTOMA.

Dasystoma, *Ramb. Hist. Nat. Ins. Neur.* 490.

1. Dasystoma pulchellum.

Dasystoma pulchellum, *Ramb. Nat. Hist. Ins, Neur.* 491.

Granada, South Spain.

Genus 13. PLECTROTARSUS.

Plectrotarsus, *Kol. Gen. et Sp. Trich.* 94, 21, pl. 2, f. 22.

"Tibiæ anticæ bicalcaratæ, intermediæ et posticæ quadricalcaratæ, calcaribus tibiarum omnium æqualibus. Tibiæ et tarsi valde spinosa. Alæ anticæ anastomosi antica et postica in una fere linea; alæ posticæ anastomosi antica completa, areola discali clausa, pen-

tagona, anastomosi postica nulla, cubito bipartito, reliquis costulis simplicibus.

1. PLECTROTARSUS GRAVENHORSTII.

Plectrotarsus Gravenhorstii, *Kol. Gen. et Sp. Trich.* 94, 1.

Var. *Luteus, hirtissimus; capite supra, antennis, tarsisque nigris; alæ anticæ nigro-cyaneæ, basi costaque luteæ, albo maculatæ.*

Luteous, thickly clothed with luteous hairs: head above black, thickly clothed with black hairs: antennæ black, thick, joints compact: tarsi black: fore-wings bluish black, very hairy, marked with white, more or less luteous at the base and along the fore border; hind-wings slightly luteous, blackish towards the tips. Length of the body 4½ lines; of the wings 11 lines.

a, b. Van Dieman's Land. From Dr. Hooker's collection.
c. Van Dieman's Land. Presented by R. Butler, Esq.
d. Australia. From Mr. Argent's collection.

Fam. 6. HYDROPSYCHIDÆ.

Palpi maxillares articulo 3o elongato, filiformi. Antennæ setaceæ. Pedes calcarati. Alæ anticæ venis transversis vix ullis; posticæ plicatæ.

Hydropsychidæ, *Curt.; Steph. Ill. Brit. Ent. Mand.* vi. 167; *Burm.*
Hydropsychides, *Westw.*

Genus 1. CYRNUS.

Tibiæ anticæ tricalcaratæ. Alæ anticæ venis transversis diversis.

Cyrnus, *Steph. Ill. Brit. Ent. Mand.* vi. 174; *Westw.*
Hydropsyche p., *Pictet.*

1. Cyrnus unipunctatus.

Nigricans; antennæ et pedes fulva; alæ fuscescentes, venis saturatioribus, anticæ macula albo-hyalina. Long. 2½—3; alar. 2½—3 lin.

Cyrnus unipunctatus, *Steph. Ill. Brit. Ent. Mand.* vi. 175, 1.

a. England. Presented by F. Walker, Esq.

2. Cyrnus pulchellus.

Fuscus; antennæ ochraceæ, fusco annulatæ; pedes fulvi; alæ ochraceo-fuscæ, anticæ ad apicem pallide luteo-irroratæ punctoque discali albido. Long. 3; alar. 6—7 lin.

Cyrnus pulchellus, *Steph. Ill. Brit. Ent. Mand.* vi. 175, 2.

England.

3. Cyrnus urbanus.

Gracilis, ochraceus; caput et thorax supra fusca; palpi nigricantes; antennæ fusco annulatæ; alæ angustæ, immaculatæ. Long. 2½; alar. 5½—6 lin.

Hydropsyche urbana, *Pictet, Rech. Phryg.* 215, 20, pl. 19, f. 13.
Cyrnus urbanus, *Steph. Ill. Brit. Ent. Mand.* vi. 175, 3.
Philopotamus urbanus? *Ramb. Hist Nat. Ins. Neur.* 503, 5.

England.

4. Cyrnus unicolor.

Subgracilis, ochraceus; caput et palpi fusca; alæ hyalinæ, iridescentes. Long. 2; alar. 6 lin.

Hydropsyche unicolor, *Pictet, Rech. Phryg.* 218, 27, pl. 20, f. 5.
Cyrnus unicolor, *Steph. Ill. Brit. Ent. Mand.* vi. 176, 4.

England.

Genus 2. POLYCENTROPUS.

Antennæ alis non longiores. Tibiæ anticæ tricalcaratæ. Alæ anticæ venis transversis paucis.

Polycentropus, *Curt. Phil. Mag.* iv. 213; *Brit. Ent.* xii. 544; *Steph.*; *Westw.*

1. Polycentropus subpunctatus.

Obscure fuscus; antennæ et pedes ochracea; alæ ochraceo-fuscæ, anticæ obsolete fusco-irroratæ. Long. 1¼—2; alar. 6—7 lin.

Polycentropus subpunctatus, *Steph. Ill. Brit. Ent. Mand.* vi. 176, 1.

a. England.

2. Polycentropus piceicornis.

Nigricans; antennæ piceæ, nigro annulatæ; tibiæ tarsique ochracea; alæ fusco-fulvescentes, anticæ obsolete fusco-nebulosæ. Long. 2; alar. 6—7 lin.

Polycentropus piceicornis, *Steph. Ill. Brit. Ent. Mand.* vi. 177, 2.

a. England.

3. Polycentropus pyrrhoceras.

Fusco-nigricans; antennæ fulvæ, fusco annulatæ; pedes ochraceo-fulvi; alæ fulvescentes, anticæ ochraceo-irroratæ. Long. 2½; alar. 6½ lin.

Polycentropus pyrrhoceras, *Steph. Ill. Brit. Ent. Mand.* vi. 177, 3.

a. ——— ? From Mr. Children's collection.

4. Polycentropus fuliginosus.

Nigricans; antennæ et abdomen picea; pedes obscure ochracei; alæ fusco-infumatæ, obsoletissime ochraceo-irroratæ.

Polycentropus fuliginosus, *Steph. Ill. Brit. Ent. Mand.* vi. 177, 4.

a. England.

5. Polycentropus concinnus.

Obscure fuscus; antennæ et pedes ochraceo-fulva, illæ obscure fusco annulatæ; abdomen fuscum, basi pallidius; alæ anticæ fulvescente-fuscæ, ochraceo-irroratæ. Long. 2¾; alar. 8 lin.

Polycentropus concinnus, *Steph. Ill. Brit. Ent. Mand.* vi. 178, 5.

England.

6. Polycentropus trimaculatus.

Ochraceo-fuscus; antennæ et pedes ochracea, illæ annulis pallidioribus; alæ anticæ ochraceo confertissime punctatæ. Long. 1½—2; alar. 5—6 lin.

Polycentropus trimaculatus, *Curt. Phil. Mag.* iv. 213. *Steph. Ill. Brit. Ent. Mand.* vi. 178, 6. *Burm.*

England.

7. Polycentropus irroratus.

Obscure fuscus; pedes subcastaneo-ochracei; alæ anticæ maculis plurimis ochraceo-sericeis nebulisque fuscis. Long 2½—3; alar. 8—9 lin.

Polycentropus irroratus, *Curt. Brit. Ent.* xii. 544. *Steph. Ill. Brit. Ent. Mand.* vi. 187, 7. *Burm. Handb. Ent.* ii. 914, 3.

Hab. England.

8. Polycentropus multiguttatus.

Fuscus; alæ anticæ ochraceo confertissime punctatæ, macula alba. Long. 3; alar. 8½—9 lin.

Polycentropus multiguttatus, *Curt. Brit. Ent.* 544. *Steph. Ill. Brit. Ent. Mand.* vi. 178, 8.

England.

9. Polycentropus concolor.

Cinereus; vertice dorsoque flavo-hirtis; antennis pedibusque cinereo-flavis; alis fusco-hirtis, pilis mediis flavis in fasciam obsoletam congestis. Long. 5½ lin.

Polycentropus concolor, *Burm. Handb. Ent.* ii. 2. 914, 2.

Germany.

10. Polycentropus validus.

Nigricans, flavo-hirtus, subtus ferrugineus; palpi testacei, basi nigri; antennæ fulvæ, robustæ; pedes testacei; alæ cinereæ, flavo-pubescentes.

Blackish, clothed with pale yellow hairs, ferruginous beneath: maxillary palpi testaceous; 1st joint black: antennæ tawny, stout: legs testaceous: wings gray, clothed with yellow down. Length of the body 2½ lines; of the wings 7 lines.

a. United States. Presented by E. Doubleday, Esq.

11. Polycentropus crassicornis.

Ferrugineus, flavo-hirtus, subtus testaceus; antennæ fulvæ, robustæ; palpi pedesque testacei; alæ subcinereæ, anticæ flavo-pubescentes et irroratæ.

Ferruginous, thickly clothed with yellow hairs, testaceous beneath: antennæ tawny, robust: palpi and legs testaceous: wings pale gray; fore-wings clothed with yellow down, adorned with numerous pale yellow dots. Length of the body 1¾—2¼ lines; of the wings 6—8 lines.

Var. β. Fore-wings without dots.

a—e. Georgia. From Mr. Abbot's collection.

12. Polycentropus invarius.

Fulvus, aureo-hirtus; antennis vertice thoracisque disco nigris; pedes testacei; alæ anticæ subfuscæ, posticæ cinereæ.

Tawny, clothed with gilded hairs: crown of the head and disk of the thorax black: antennæ black, a little longer than the body, tawny at the base: legs testaceous: fore-wings brownish; veins ferruginous: hind-wings gray. Length of the body 2½ lines; of the wings 8 lines.

a. Nova Scotia. From Lieut. Redman's collection.

Genus 3. PLECTROCNEMIA.

Antennæ alis longiores. Tibiæ anticæ tricalcaratæ. Alæ anticæ venis transversis paucis.

Plectrocnemia, *Steph. Ill. Brit. Ent. Mand.* vi. 168; *Westw.*
Philopotamus p., *Curt.*
Hydropsyche p., *Pictet.*

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1. Plectrocnemia senex.

Obscure fusca; frons et thorax pilis argenteo-albidis vestiti; antennæ fulvæ, albo annulatæ; alæ anticæ canescentes, albido nigroque variegatæ, costa nigro punctata. Long. 5—6; alar. 12—13 lin.

Philopotamus conspersus? *Curt. Phil. Mag.* iv. 213.
Hydropsyche senex, *Pictet, Rech. Phryg.* 219, 28, pl. 19, f. 1.
Plectrocnemia senex, *Steph. Ill. Brit. Ent. Mand.* vi. 168, 1.
Polycentropus senex, *Burm. Handb. Ent.* ii. 913, 1.

a—e. England.
f. Italy. From Dr. Leach's collection.

Genus 4. PHILOPOTAMUS.

Antennæ graciles, alis longiores. Tibiæ anticæ bicalcaratæ. Alæ posticæ parvæ, vix plicatæ.

Philopotamus, *Leach, MSS.; Steph. Ill. Brit. Ent. Mand.* vi. 169; *Westw.; Ramb.*
Phrygauea p., *Fabr.; Scop.; Schr.; Oliv.; Latr.; Donov.*

1. Philopotamus Scopulorum.

Niger; antennæ et pedes fulva, illæ fusco annulatæ; alæ anticæ fuscæ, luteo maculatæ, posticæ fuscescentes, maculis obscurioribus. Long. 4—5¼; alar. 9—15. lin.

Philopotamus Scopulorum, *Leach, MSS. Steph. Ill. Brit. Ent. Mand.* vi. 169, 1.

a. England.
b. Italy. From Dr. Leach's collection.

2. Philopotamus variegatus.

Niger; antennæ et pedes fulvescentia; alæ anticæ fuscæ, maculis plurimis rotundatis luteis, posticæ cinereæ. Long. 5; alar. 14—16 lin.

Phryganea variegata, *Scop. Ent. Carn.* 693. *Schr. Ins. Austr.* 621. *Faun. Boic.* ii. 182, 1910. *Fabr. Ent. Syst.* ii. 79, 23. *Oliv. Enc. Méth.* 546, 26. *Latr. Hist. Nat.* xiii. 90, 19.

Philopotamus variegatus, *Steph. Ill. Brit. Ent. Mand.* vi. 169, 2. *Burm. Handb. Ent.* ii. 915, 1. *Ramb. Hist. Nat. Ins. Neur.* 502, 1.
Hydropsyche montana, *Pictet, Rech. Phryg.* 210, 12, pl. 18, f. 5.
Hydropsyche variegata? *Pictet, Rech. Phryg.* 208, 11, pl. 18, f. 4.

a. ——— ? From Mr. Children's collection.

3. Philopotamus montanus.

Niger; antennæ obscure fuscæ; pedes fulvi; alæ fuscæ; obscure luteo maculatæ. Long. 3—4; alar. 9—11 lin.

Phryganea montana, *Donov. Brit. Ins.* xvi. pl. 548, f. 1.
Philopotamus montanus, *Steph. Ill. Brit. Ent. Mand.* vi. 170, 3.

England.

4. Philopotamus longipennis.

Philopotamus longipennis, *Ramb. Hist. Nat. Ins. Neur.* 504, 6.

France.

5. Philopotamus dubius.

Philopotamus dubius, *Ramb. Hist. Nat. Ins. Neur.* 503, 3.

France.

6. Philopotamus tenellus.

Philopotamus tenellus, *Ramb. Hist. Nat. Ins. Neur.* 503, 4.

France.

7. Philopotamus confusus.

Niger, cano-pilosus; antennis basi testaceo annulatis; abdomine subtus, palpis, pedibusque testaceis; alæ cinereæ, anticæ obsolete irroratæ.

Black, clothed with hoary hairs: palpi, abdomen beneath and legs dull testaceous: wings gray; fore-wings very indistinctly covered with pale dots; veins black. Length of the body 3 lines; of the wings 11 lines

a. Arctic America. District watered by the Mackenzie and Slave Rivers. Presented by Sir J. Richardson.

8. Philopotamus alternans.

Niger, cano-hirtus; antennis basi, abdominis segmentis apice pedibusque fulvis; alæ anticæ fuscæ, cano confertim irroratæ, posticæ cinereæ.

Black, clothed with hoary hairs: antennæ tawny at the base: hind borders of the abdominal segments and legs tawny: fore-wings brown, mostly thickly covered with hoary dots; hind-wings gray. Length of the body 3½ lines; of the wings 11 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

9. Philopotamus indecisus.

Nigricans, subtus testaceus; antennæ testaceæ, fusco annulatæ; pedes testacei; alæ cinereæ, anticæ confertim flavo guttatæ.

Blackish, testaceous beneath: palpi testaceous, tawny towards the base: antennæ testaceous, with a brown ring on each joint: legs testaceous: wings gray; fore-wings slightly brown, adorned with numerous pale yellow dots of various size. Length of the body 3 lines; of the wings 10½ lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

b. Nova Scotia. From Lieut. Redman's collection.

10. Philopotamus reciprocus.

Nigricans; antennis pedibusque testaceis; palpi ferruginei, basi nigri; alæ anticæ subfuscæ, flavo confertim irroratæ, posticæ subcinereæ.

Blackish: palpi ferruginous, black towards the base: antennæ and legs testaceous: fore-wings slightly brown, with numerous pale yellow dots of various size; hind-wings pale brown. Length of the body 3 lines; of the wings 13 lines.

Closely allied to P. indecisus.

a. North America? Presented by the Entomological Club.

11. Philopotamus distinctus.

Niger; palpi et pedes obscure testacei; alæ anticæ fusco-cinereæ flavo confertim guttatæ, posticæ cinereæ.

Black, clothed with black and yellow hairs: antennæ very much longer than the body: palpi and legs dull testaceous: wings gray: fore-wings tinged with brown, adorned with numerous pale yellow dots of various size. Length of the body 2 lines; of the wings 5½ lines.

a—d. Trenton Falls, New York. Presented by E. Doubleday, Esq.

Genus 5. MONOPSEUDOPSIS, n.

Capitis vertex utrinque gibbosus. Antennæ articulis longis cylindricis. Pedes antici breves, tenues, tibiis bicalcaratis; posteriores longi, tibiis quadricalcaratis.

Head a little narrower than the thorax, with a large round convex protuberance on each side between the eyes, by the base of the antennæ: maxillary palpi long; last joint very long and slender: joints of the antennæ thrice longer than broad, or more, except near the base, where they are twice longer than broad; first joint very stout: legs slender; their pairs of spurs of unequal length; fore-legs short and slender, with two little spurs at the tips: posterior legs long, with four long spurs, one pair in the middle, and one at the tips.

1. MONOPSEUDOPSIS INSCRIPTUS.

Niger; pedes flavi; alæ anticæ luridæ, maculis vittisque flavis maculaque subapicali hyalina ornatæ; alæ posticæ subcinereæ.

Black, with a slight hoary tinge: head clothed with short black hairs above, with ferruginous hairs beneath: antennæ longer than the body; second, third and fourth joints ferruginous: palpi and legs yellow: fore-wings lurid, with three yellow stripes, one on each border and one on the disk, and with six large irregularly-triangular yellow spots, three resting on each border; tips gray, with a large almost round hyaline spot in the disk: hind-wings pale gray, with two almost colourless marks near the tip of the fore border; veins pale. Length of the body 4½ lines; of the wings 14 lines.

a. New Holland. Presented by the Entomological Club.

Genus 6. HYDROPSYCHE.

Antennæ graciles, alis longiores. Tibiæ anticæ bicalcaratæ. Alæ posticæ amplæ, valde plicatæ.

Phryganea p., *Donov.*
Philopotamus p., *Curt.*
Hydropsyche, *Pictet, Rech. Phryg.* 199; *Steph. Ill. Brit. Ent. Mand.* vi. 170; *Westw.*

1. HYDROPSYCHE ATOMARIA.

Fusca, cano-pilosa, subtus ochracea; pedes flavescentes; alæ canescentes, anticæ ochraceo nigroque maculatæ. Long. 4½; alar. 9—11 lin.

Phryganea atomaria, *Mus. Lesk. pars Ent.* 51, 36. *Gmel. ed. Syst. Nat.* 2637. *Oliv. Enc. Méth.* 559, 27.
Phryganea maculata, *Donov. Brit. Ins.* xvi. pl. 548, f. 2.
Hydropsyche atomaria, *Pict. Rech. Phryg.* 201, pl. 17, f. 1—5. *Steph. Ill. Brit. Ent. Mand.* vi. 171, 1. *Ramb. Hist. Nat. Ins. Neur.* 505, 1.
Philopotamus instabilis, *Curt. Phil. Mag.* iv. 213.

a. England.

2. HYDROPSYCHE TENUICORNIS.

Nigricans; antennæ graciles, ochraceæ; pedes ochraceo-fulvi; alæ anticæ canescentes ochraceo nigroque punctatæ, posticæ fuscescentes. Long. 4; alar. 10—11 lin.

Hydropsyche tenuicornis, *Pictet, Rech. Phryg.* 203, 2, pl. 17, f. 2. *Steph. Ill. Brit. Ent. Mand.* vi. 171, 2.

Europe.

3. HYDROPSYCHE GUTTATA.

Nigra, cinereo-pilosa; pedes fulvi; alæ anticæ canescentes ochraceo nigroque distincte maculatæ, posticæ albidæ. Long. 3½; alar. 9—10 lin.

Hydropsyche guttata, *Pictet, Rech. Phryg.* 203, 3, pl. 17, f. 3. *Steph. Ill. Brit. Ent. Mand.* vi. 172, 3. *Burm. Handb. Ent.* ii. 912, 3.

Europe.

4. Hydropsyche pellucidula.

Nigricans; antennæ ochraceæ, fusco punctatæ; abdomen fuscum; alæ semihyalinæ, anticæ indistincte ochraceo fuscoque irroratæ, marginibus internis et posticæ ochraceo maculatæ. Long. 6½; alar. 13—15½ lin.

Philopotamus pellucidulus, *Curt. Phil. Mag.* iv. 213.
Hydropsyche læta, *Pictet, Rech. Phryg.* 204, 5, pl. 17, f. 4. *Burm. Handb. Ent.* ii. 912, 1.
Hydropsyche pellucidula, *Steph. Ill. Brit. Ent. Mand.* vi. 172, 4.

a—d. ——— ? From Mr. Children's collection.

5. Hydropsyche hibernica.

Fusca, subtus antennis pedibusque ochraceis; alæ hyalinæ, venis ochraceis, anticæ ad marginem posticum fusco obscure punctatæ. Long. 4—5; alar. 11½—12½ lin.

Hydropsyche hibernica, *Curt. Brit. Ent.* 601. *Steph. Ill. Brit. Ent. Mand.* vi. 173, 5.

Britain.

6. Hydropsyche lanceolata.

Nigricans; pedes fulvo-ochracei; alæ fuscæ, anticæ subfalcatæ obscure irroratæ margine postico fusco punctatæ. Long. 3½—4; alar. 12—13 lin.

Hydropsyche lanceolata, *Curt. Phil. Mag.* iv. 213. *Steph. Ill. Brit. Ent. Mand.* vi. 173, 6.

England.

7. Hydropsyche angustipennis.

Nigricans; antennæ subserratæ; alæ fuscæ, anticæ ochraceo tinctæ stigmate fusco maculisque ochraceis. Long. 3½—4½; alar. 10—13 lin.

Hydropsyche angustipennis, *Curt. Phil. Mag.* iv. 213. *Steph. Ill. Brit. Ent. Mand.* vi. 173, 7.

England.

8. Hydropsyche fulvipes.

Nigra; abdominis segmenta marginibus pallidis; tibiæ tarsique pallide fulva; alæ anticæ fuscæ, ochraceo obscure nebulosæ. Long. 5—6; alar. 13—14 lin.

Hydropsyche fulvipes, *Curt. Brit. Ent.* xiii. 601. *Steph. Ill. Brit. Ent. Mand.* vi. 174, 8.

England.

9. Hydropsyche angustata.

Fusco-cinerea; abdomen nigricans, subtus virescens; alæ subhyalinæ, anticæ ochraceæ holosericeæ iridescentes nebulis duabus subochraceis. Long. 2½; alar. 6½—7 lin.

Hydropsyche angustata, *Curt. Brit. Ent.* 601. *Steph. Ill. Brit. Ent. Mand.* vi. 174, 9.

a, b. England.

10. Hydropsyche cinerea.

Nigra, albo-pilosa; thorax utrinque et pedes fulvi; alæ anticæ cinereæ, maculis albis punctisque nigris. Long 7 lin.

Hydropsyche cinerea, *Pictet, Rech. Phryg.* 204, 4. pl. 19, f. 3.

Geneva.

11. Hydropsyche variabilis.

Nigricans; alæ anticæ fulvæ, maculis pallidis punctisque nigricantibus. Long 6 lin.

Hydropsyche variabilis, *Pictet, Rech. Phryg.* 205, 6, pl. 17, f. 5. *Burm. Handb. Ent.* ii. 912, 2.

Geneva.

12. Hydropsyche nebulosa.

Nigra; tibiæ tarsique fulva; alæ anticæ fuscæ, pilis flavis maculatæ. Long. 6 lin.

Hydropsyche nebulosa, *Pictet, Rech. Phryg.* 206, 7, pl. 19, f. 4.

Geneva.

13. Hydropsyche tincta.

Nigricans; caput et antennæ cinerea; pedes cinereo-fulvi; alæ anticæ fuscæ, maculis duabus posticis indistinctis argenteis. Long. 5 lin.

Hydropsyche tincta, *Pictet, Rech. Phryg.* 206, 8, pl. 19, f. 5.

Geneva.

14. Hydropsyche lepida.

Fulva; antennæ apice nigricantes; alæ anticæ subcinereæ, maculis auratis punctisque anticis nigris. Long 3 lin.

Hydropsyche lepida, *Pictet, Rech. Phryg.* 207, 9, pl. 18, f. 1.

Geneva.

15. Hydropsyche angustata.

Nigricans; os fulvum; antennæ fulvo fuscoque annulatæ; alæ anticæ subcinereæ maculis nonnullis anticis unaque postica fuscis. Long 3 lin.

Hydropsyche angustata (bis lecta), *Pictet, Rech. Phryg.* 208, 10, pl. 19, f. 6.

Geneva.

16. Hydropsyche brevicornis.

Nigra; antennæ fulvæ, fusco annulatæ; caput maculis duabus, thoracisque latera fulva; abdomen fuscum; alæ anticæ fuscæ, iridescentes. Long. 4 lin.

Hydropsyche brevicornis, *Pictet, Rech. Phryg.* 211, 13, pl. 19, f. 7.

Geneva.

17. Hydropsyche occipitalis.

Nigra; antennæ fuscæ, annulis obscurioribus; caput et thorax maculis duabus, hujusque latera fulva; abdomen fuscum; alæ anticæ fuscæ, iridescentes. Long. 4 lin.

H. brevicornis, var.?

Hydropsyche occipitalis, *Pictet, Rech. Phryg.* 211, 14, pl. 19, f. 8.

Geneva.

18. Hydropsyche columbina.

Nigra ; caput fulvo-pubescens ; antennæ nigricantes ; pedes fulvi ; alæ anticæ fuscæ, iridescentes. Long. 3½ lin.

Hydropsyche columbina, *Pictet, Rech. Phryg.* 212, 15, pl. 19, f. 9.

Geneva.

19. Hydropsyche vitrea.

Nigra, subtus fusca ; occiput et prothorax fulva ; antennæ fuscæ ; pedes fulvi ; alæ cinereæ, hyalinæ. Long. 3½ lin.

Hydropsyche vitrea, *Pictet, Rech. Phryg.* 212, 16, pl. 19, f. 10.

Geneva.

20. Hydropsyche microcephala.

Nigra, subtus fusca ; pedes cinereo-fulvi ; alæ hyalinæ, iridescentes. Long. 3½ lin.

Hydropsyche microcephala, *Pictet, Rech. Phryg.* 213, 17, pl. 19, f. 11.

Geneva.

21. Hydropsyche maculicornis.

Fulva ; caput nigrum ; antennæ annulis apiceque fuscis ; alæ anticæ subcinereæ, maculis posticis nigricantibus. Long. 3 lin.

Hydropsyche maculicornis, *Pictet, Rech. Phryg.* 213, 18, pl. 18, f. 2.

Geneva.

22. Hydropsyche fragilis.

Fulva ; caput nigricans ; antennæ fusco annulatæ ; thorax dorso fusco ; alæ anticæ cinereæ nebulosæ. Long. 2⅔ lin.

Hydropsyche fragilis, *Pictet, Rech. Phryg.* 214, 19, pl. 19, f. 12.

Geneva.

23. Hydropsyche dives.

Nigra; tibiæ anticæ et intermediæ fulvæ; alæ anticæ nigricantes, aureo-pilosæ, viridi purpureoque micantes. Long 3 lin.

Hydropsyche dives, *Pictet, Rech. Phryg.* 215, 21, pl. 19, f. 14.

Geneva.

24. Hydropsyche turtur.

Nigra, aureo-pilosa; antennæ fuscæ; pedes fulvi; alæ anticæ subcinereæ, iridescentes. Long. 3 lin.

Hydropsyche turtur, *Pictet, Rech. Phryg.* 216, 22, pl. 20, f. 1.

Geneva.

25. Hydropsyche flavicoma.

Nigra; caput aureo-pilosum; pedes cinerei; alæ nigricantes, iridescentes. Long. 3 lin.

Hydropsyche flavicoma, *Pictet, Rech. Phryg.* 216, 23, pl. 18, f. 3.

Geneva.

26. Hydropsyche nigripennis.

Nigra; pedes cinerei; alæ nigricantes, iridescentes. Long. 3 lin.

Hydropsyche nigripennis, *Pictet, Rech. Phryg.* 217, 24, pl. 20, f. 2.
H. flavicoma, var.?

Geneva.

27. Hydropsyche humeralis.

Nigra; thorax fuscus; pedes cinerei; alæ anticæ nigricantes, iridescentes, basi fulvæ. Long. 3 lin.

Hydropsyche humeralis, *Pictet, Rech. Phryg.* 217, 25, pl. 20, f. 3.

Geneva.

28. HYDROPSYCHE PICEA.

Nigra; pedes cinerei; alæ anticæ nigricantes, subiridescentes, macula media albida. Long. 2½ lin.

Hydropsyche picea, *Pictet, Rech. Phryg.* 218, 26, pl. 20, f. 4.
Geneva.

29. HYDROPSYCHE BREVICOLLIS.

Nigra; antennæ fusco fulvoque annulatæ; pedes fulvi; alæ fulvæ, iridescentes. Long. 3 lin.

Hydropsyche brevicollis, *Pictet, Rech. Phryg.* 221, 30, pl. 20, f. 6.
Geneva.

30. HYDROPSYCHE ASPERSA.

Hydropsyche aspersa, *Ramb. Hist. Nat. Ins. Neur.* 506, 4.
France.

31. HYDROPSYCHE OPHTHALMICA.

Hydropsyche ophthalmica, *Ramb. Hist. Nat. Ins. Neur.* 505, 2.
France, Spain.

32. HYDROPSYCHE VARIA.

Hydropsyche varia, *Ramb. Hist. Nat. Ins. Neur.* 506, 3.
France.

33. HYDROPSYCHE DUBIA.

Nigra, subtus testacea; antennæ pallide testaceæ, fusco annulatæ; palpi ferruginei; pedes testacei; alæ anticæ subfuscæ obsolete irroratæ, posticæ subcinereæ.

Black, testaceous beneath: antennæ pale testaceous, with a brown ring on each joint, and wholly brown towards the tips: palpi ferruginous: legs testaceous: fore-wings slightly brown, indistinctly covered with pale dots: hind-wings pale gray. Length of the body 3 lines; of the wings 11 lines.

a. North America? Presented by the Entomological Club.

34. Hydropsyche dubitans.

Picea; antennæ testaceæ apice nigræ; pectus ferrugineum; pedes testacei; alæ cinereæ, anticæ fusco-hirtæ, maculis nonnullis e pilis flavis congestis pallidioribus.

Pitchy, clothed with pale hairs: antennæ testaceous, black towards the tips: palpi, legs and hind borders of the abdominal segments testaceous: breast ferruginous: wings gray; fore-wings clothed with brown hairs, having some indistinct spots composed of pale yellow hairs. Length of the body 3 lines; of the wings 11 lines.

a. United States. Presented by E. Doubleday, Esq.

35. Hydropsyche crassicornis.

Ferruginea, fulvo-hirta; antennæ articulis basi pallidioribus; palpi pedesque testacei; alæ cinereæ fulvo-pilosæ, anticæ macula discali subhyalina.

Ferruginous, clothed with tawny hairs: antennæ very stout, very much longer than the body; each joint paler towards the base: palpi and legs testaceous: wings gray, clothed with tawny hairs; fore-wings with an almost colourless spot at the base of the apical areolets; veins brown. Length of the body 2½ lines; of the wings 9 lines.

a, *b*. Georgia. From Mr. Abbot's collection.

36. Hydropsyche maculicornis.

Nigricans; antennæ testaceæ, fusco annulatæ; pectus ferrugineum; pedes testacei; alæ anticæ fusco-cinereæ obsolete irroratæ; posticæ cinereæ.

Blackish, hairy: antennæ testaceous, with a brown ring on each joint: palpi tawny: breast ferruginous: legs testaceous: fore-wings brownish gray, with numerous indistinct pale dots: hind-wings gray. Length of the body 2 lines; of the wings 7 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

37. Hydropsyche robusta.

Ferruginea; antennis palpis pedibusque testaceis; thorax piceo bivittatus; alæ cinereæ, anticæ irroratæ.

Ferruginous, hairy: palpi, antennæ and legs testaceous: thorax with a broad pitchy stripe on each side: wings gray, clothed with yellowish down; fore-wings with pale dots, which are most distinct along the border; veins brown. Length of the body 2 lines; of the wings 8 lines.

a, b. North America? Presented by the Entomological Club.

38. Hydropsyche transversa.

Testacea; antennæ nigræ, basi testaceæ; abdomen nigrum, marginibus posticis albidis; pedes albi; alæ albidæ, anticæ guttis apicibusque subcinereis ad costam flavescentes.

Testaceous: antennæ black, very slender, testaceous towards the base: abdomen black; hind borders of the segments whitish: legs white: wings whitish; fore-wings yellowish on the fore border and along some of the longitudinal veins, adorned with numerous transverse pale gray marks, some of which are confluent; tips pale gray, with some whitish marks; veins pale yellow. Length of the body 3½ lines; of the wings 12 lines.

a, b. Georgia. From Mr. Abbot's collection.

39. Hydropsyche vicaria.

Ferruginea; corpore subtus pedibusque testaceis; antennæ testaceæ nigro-hirtæ; alæ anticæ fulvæ fusco conspersæ macula parva rotunda discali flavescente.

Ferruginous, clothed with pale hairs, testaceous beneath: antennæ testaceous, partly clothed with black hairs: legs testaceous: fore-wings hairy, tawny, with numerous brown marks, which are most prevalent towards the tips, and with a small round pale yellowish spot in the disk before the middle; hind-wings gray. Length of the body 3½ lines; of the wings 12 lines.

a. Venezuela. From Mr. Dyson's collection.

40. Hydropsyche diminuta.

Nigra, ferrugineo-hirta; antennæ fulvæ, annulis albidis; palpi pedesque testacei; alæ anticæ fusco-cinereæ, posticæ cinereæ.

Black, clothed with ferruginous hairs: antennæ tawny, with a whitish ring on each joint: palpi and legs testaceous: fore-wings brownish gray; hind-wings gray. Length of the body 2 lines; of the wings 6½ lines.

a. Sierra Leone. Presented by the Rev. D. F. Morgan.

41. Hydropsyche hyalina.

Nigra; pedes fulvi, tarsis nigricantibus; alæ anticæ fuscæ maculis sex hyalinis, posticæ hyalinæ fusco marginatæ.

Hydropsyche hyalina, *Pictet, Mém. Soc. Phys. et d'Hist. Nat. de Genève*, vii. pl. f. 2.

East Indies.

42. Hydropsyche multifaria.

Nigra; caput testaceum, nigro fasciatum; antennæ fulvæ, nigro testaceoque fasciatæ; pedes testacei, tibiis posticis nigris; alæ fuscæ, flavo maculatæ.

Black, shining: head luteous, testaceous beneath, with a black band between the eyes: antennæ black towards the base, which is luteous, with a broad pale testaceous band in the middle, tawny from thence to the tips: legs pale testaceous; tips of tibiæ and of tarsi black; hind-tarsi black, except at the base: fore-wings brown, with four triangular yellow spots on the fore border, and with seven others of various size and shape in the disk or on the hind border; hind-wings pale brown, pale yellow along the fore border. Length of the body 4 lines; of the wings 10 lines.

a. Ceylon. Presented by William Templeton, Esq.

Genus 7. PHILANISUS, n.

Palpi maxillares articulo 5o elongato filiformi. Antennæ subfiliformes sat validæ, alis vix breviores. Tibiæ anticæ vix calcaratæ, intermediæ bicalcaratæ, posticæ quadricalcaratæ.

Maxillary palpi with the fifth joint long, filiform: antennæ nearly filiform, rather stout, almost as long as the wings: fore-tibiæ with two very short spurs at the tips; middle tibiæ with a pair of long spurs at the tips; hind tibiæ with two pairs of long spurs, one at three-fourths of the length, the other at the tips.

1. PHILANISUS PLEBEIUS.

Fulvus; antennis pedibusque testaceis; alæ anticæ subcinereæ fusco maculatæ, posticæ subhyalinæ.

Male.—Tawny, thinly clothed with tawny hairs: antennæ testaceous, rather stout, slightly setaceous, much longer than the body: legs testaceous, long; fore-tibiæ without spurs; hinder tibiæ with two pairs of long spurs, one pair near the tips, the other at the tips: abdomen with two appendages at the tip: wings narrow; fore-wings slightly gray, with pale brown marks or interrupted bands: hind-wings subhyaline. Length of the body 2¼—2¾ lines; of the wings 7—8½ lines.

a, b. New Zealand. Presented by Dr. Sinclair.

Genus 8. APHELOCHEIRA.

Antennæ alis breviores. Tibiæ anticæ bicalcaratæ.

Aphelocheira, *Steph. Ill. Brit. Ent. Mand.* vi. 179.
Hydropsyche p., *Pictet.*
Diplectrona, *Westw.*

1. APHELOCHEIRA FLAVO-MACULATA.

Obscure fusca; abdominis segmenta marginibus pallidis; alæ cinereo-fuscæ, anticæ obsolete luteo maculatæ. Long. 2½—2¾; alar. 6—8 lin.

Phryganea umbrosa, *Linn. Syst. Nat. ed.* 12, ii. 910, 21. *Faun. Suec.* 1498. *De Vill. Ent. Linn.* iii. 35, 26. *Oliv. Enc. Méth.* 548, 40. *Zett. Ins. Lapp.* 1069, 36.
Hydropsyche flavo-maculata? *Pictet, Rech. Phryg.* 220, 29, pl. 19, f. 2.
Aphelocheira flavo-maculata, *Steph. Ill. Brit. Ent. Mand.* vi. 179, 1, pl. 32, f. 3.
England.

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2. APHELOCHEIRA SUBAURATA.

Obscure fusca ; pedes ochraceo-fulvi ; alæ subfuscæ, anticæ immaculatæ aureo-pilosæ. Long. 1¾ ; alar. 5¾ lin.

Aphelocheira subaurata, *Steph. Ill. Brit. Ent. Mand.* vi. 180, 2.

England.

Fam. 5. RHYACOPHILIDÆ.

Palpi maxillares articulo 2o brevissimo ; 3o brevi, ovato. Antennæ setaceæ. Pedes calcarati. Alæ anticæ venis transversis vix ullis ; posticæ plicatæ.

Rhyacophilidæ, *Steph. Ill. Brit. Ent. Mand.* vi. 154.
Rhyacophilides, *Westw.*
Rhyacophiloidea, *Agassiz.*

Genus 1. GLOSSOSOMA.

Tibiæ anticæ bicalcaratæ. Alæ quatuor areola discali.

Glossosoma, *Curt. Phil. Mag.* iv. 216 ; *Steph. Ill. Brit. Ent. Mand.* vi. 160 ; *Westw.*

1. GLOSSOSOMA BOLTONI.

Fusco-castanea ; abdominis apex et pedes ochracei ; alæ pallide fuscescentes, anticæ maculis apicalibus obscure ochraceis. Long. 4 ? ; alar. 10 lin.

Glossosoma Boltoni, *Curt. Phil. Mag.* iv. 216. *Steph. Ill. Brit. Ent. Mand.* vi. 161, 1.

Rhyacophila vernalis? *Pictet, Rech. Phryg.* 189, pl. 15, f. 4.

a, b. England.

2. GLOSSOSOMA FIMBRIATA.

Piceo-fusca ; caput, abdomen apice, pedesque ochracea ; alæ pallide fuscescentes immaculatæ. Long. 2½—3 ; alar. 5¾—7 lin.

Glossosoma fimbriata, *Steph. Ill. Brit. Ent. Mand.* vi. 161, 2, pl. 32, f. 1.

a—e. England.

Genus 2. TINODES.

Tibiæ anticæ bicalcaratæ. Alæ anticæ areola discali.

Tinodes, *Leach, MSS.; Steph. Ill. Brit. Ent. Mand.* vi. 162; *Westw.*

Group 1.

Pedes fœminæ tibiis tarsisque intermediis non dilatatis. Alæ anticæ venis distinctis, areola discali clausa.

1. TINODES PALLESCENS.

Pallide ochraceo-fulvus; abdomen saturatius, apice pallidum; pedes ochracei; alæ anticæ ochraceo-flavæ, venis pallidis. Long. 2½; alar. 6—7 lin.

Tinodes pallescens, *Steph. Ill. Brit. Ent. Mand.* vi. 162, 1.

a. England.

2. TINODES FLAVICEPS.

Ochraceus; caput et pedes ochraceo-flava; antennæ obscure fuscæ; thorax et abdomen supra schistacea. Long. 2½; alar. 7—8 lin.

Tinodes flaviceps, *Steph. Ill. Brit. Ent. Mand.* vi. 162, 2.

England.

3. TINODES XANTHOCERAS.

Fuscus; antennæ et pedes flavo-ochracea; alæ hyalinæ, ochraceo-fuscæ, iridescentes, venis saturatioribus. Long. 2½; alar. 8 lin.

Tinodes xanthoceras, *Steph. Ill. Brit. Ent. Mand.* vi. 163, 3.

England.

4. TINODES LURIDUS.

Fusco-ochraceus; caput, antennæ, thorax supra, et abdomen saturate fusca; pedes ochraceo-fulvi; alæ iridescentes, venis fuscis. Long. 2½—3; alar. 8½—9¼ lin.

Tinodes luridus, *Curt. Phil. Mag.* iv. 163, 4. *Steph. Ill. Brit. Ent. Mand.* vi. 163, 4.

England.

5. TINODES PALLIPES.

Ochraceo-fuscus; palpis nigris; pedibus flavis; alis latis, anticis ochraceo-fuscis aureo-pilosis venis fuscescentibus, posticis iridescentibus. Long. 3; alar. 8½ lin.

Tinodes pallipes, *Steph. Ill. Brit. Ent. Mand.* vi. 163, 5.

England.

6. TINODES ANNULICORNIS.

Ochraceus; palpi, thoracis dorsum et abdomen basi supra fuscescentia; antennæ fuscæ, ochraceo annulatæ; pedes ochraceo-flavi. Long. 2½; alar. 8 lin.

Tinodes annulicornis, *Steph. Ill. Brit. Ent. Mand.* vi. 163, 6.

England.

7. TINODES ALBIPUNCTATUS.

Pallide ochraceus; caput, thorax et abdomen supra fusca; pedes pallide flavi; alæ subochraceo-fuscæ, anticæ ad marginem posteriorem nebulis saturatioribus punctisque albidis. Long. 2½; alar. 7½ lin.

Tinodes albipunctatus, *Steph. Ill. Brit. Ent. Mand.* vi. 164, 7.

England.

Group 2.

Pedes fœminæ tibiis tarsisque intermediis dilatatis. Alæ anticæ venis indistinctis, areola discali postice aperta.

8. TINODES OBSCURUS.

Ochraceo-flavus; abdomen supra subfuscum; alæ subhyalinæ; anticæ fulvescente-ochraceæ, immaculatæ. Long. 2¾; alar. 8½ lin.

Tinodes obscurus, *Steph. Ill. Brit. Ent. Mand.* vi. 164, 8.

a, *b*. England.

9. Tinodes pusillus.

Obscure fuscus; antennæ ochraceo fuscoque annulatæ; abdomen nigricans; pedes ochraceo-flavi; alæ fusco-testaceæ.

Phryganea pusilla? *Fabr. Ent. Syst.* ii. 81.
Tinodes pusillus, *Steph. Ill. Brit. Ent. Mand.* vi. 164, 9.

England.

Genus 3. BERÆA.

Antennæ articulo 1o maximo. Tibiæ anticæ bicalcaratæ. Alæ areola discali nulla.

Beræa, *Steph. Ill. Brit. Ent. Mand.* vi. 158; *Westw.*
Thya, *Curt. Phil. Mag.* iv. 216.

1. Beræa albipes.

Atra; pedes fusci; tarsis albidis; alæ nigro-fuscæ, anticæ subiridescentes atomis nonnullis albidis. Long. 2; alar. 5½—6 lin.

Beræa albipes, *Steph. Ill. Brit. Ent. Mand.* vi. 158, 1.
Thya pullata? *Curt. Phil. Mag.* iv. 216.

England.

2. Beræa pygmæa.

Atra; pedes fusci, genubus albidis; alæ fuscæ, immaculatæ. Long. 2; alar. 4½—5 lin.

Beræa pygmæa, *Steph. Ill. Brit. Ent. Mand.* vi, 158, 2.
Rhyacophila melas? *Pictet, Rech. Phryg.* 196, 25, pl. 16, f. 21.

England.

3. Beræa Marshamella.

Atra; pedes fusci, genubus tarsisque subochraceis; alæ anticæ angustæ, subochraceo-fuscæ, immaculatæ. Long. 2; alar. 5 lin.

Thya Maurus, *Curt. Phil. Mag.* iv. 216.
Rhyacophila nigrocincta? *Pictet, Rech. Phryg.* 197, 27, pl. 16, f. 23.
Beræa Marshamella, *Steph. Ill. Brit. Ent. Mand.* vi. 158, 3.

England.

4. Beræa? obscura.

Nigricans, fusco-hirta; pectus et abdomen ferruginea; pedes testacei; alæ nigro-fuscæ, ciliatæ.

Blackish, thickly clothed with brown hairs: antennæ black: breast and abdomen ferruginous: legs testaceous: wings blackish brown, deeply fringed. Length of the body 1½ line; of the wings 4 lines.

a, b, St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

Genus 4. ANTICYRA.

Antennæ articulo 1o parvo. Tibiæ anticæ bicalcaratæ. Alæ areola discali nulla, elongatæ, angustæ, obtusæ.

Anticyra, *Curt. Phil. Mag.* iv. 217; *Westw.*; *Steph. Ill. Brit. Ent. Mand.* vi. 159.
Rhyacophila p., *Pictet.*

1. Anticyra phœopa.

Ochracea; caput et thorax supra fusca; antennæ fuscæ, ochraceo cinctæ; tibiæ tarsique fuscescentia; alæ anticæ cinereo-fuscescentes, posticæ iridescentes. Long. 2½; alar. 5½ lin.

Rhyacophila tomentosa? *Pictet, Rech. Phryg.* 189, 11, pl. 16, f. 9.
Anticyra phœopa, *Steph. Ill. Brit. Ent. Mand.* vi. 159, 1.

a. England.

2. Anticyra gracilipes.

Pallide fusca; antennæ pallidæ, nigro annulatæ; pedes fuscescentes; alæ anticæ ochraceæ. Long. 2½; alar. 5—5½ lin.

Anticyra gracilipes, *Curt. Phil. Mag.* iv. 217. *Steph. Ill. Brit. Ent. Mand.* vi. 159, 2.

England.

3. Anticyra subochracea.

Pallide ochraceo-fusca; antennæ fusco annulatæ; pedes fulvescentes; alæ angustæ, anticæ subochraceæ. Long. 2½; alar. 5½—6 lin.

Anticyra latipes? *Curt. Phil. Mag.* iv. 217.
Anticyra subochracea, *Steph. Ill. Brit. Ent. Mand.* vi. 160, 3.

a. England.

4. Anticyra ciliaris.

Pallide ochracea; antennæ fusco maculatæ; thorax rufus; abdomen nigro-fuscum. Long. 1½; alar. 4¾ lin.

Anticyra ciliaris, *Steph. Ill. Brit. Ent. Mand.* vi. 160, 4.

a, *b*. England.

5. Anticyra? robusta.

Picea, fulvo-hirta, subtus ferruginea; antennis, palpis, pedibusque testaceis; alæ anticæ subfuscæ maculis duabus discalibus e pilis congestis flavis, posticæ subcinereæ.

Pitchy, clothed with tawny hairs, ferruginous beneath: antennæ testaceous, stout, almost as long as the body: palpi and legs testaceous: fore-wings slightly brown, with two spots on the disk composed of pale yellow hairs: hind wings pale gray. Length of the body 2 lines; of the wings 6 lines.

a. England.

This species probably belongs to a genus not yet described.

Genus 5. AGAPETUS.

Antennæ articulo 1o parvo. Tibiæ anticæ bicalcaratæ. Alæ breves, rotundatæ, areola discali nulla.

Agapetus, *Curt. Phil. Mag.* iv.; *Steph. Ill. Brit. Ent. Mand.* vi. 155; *Westw.*
Phryganea p., *Linn.; Oliv.; Turton.*
Rhyacophila p., *Pictet.*

1. AGAPETUS FUNEREUS.

Niger, obscurus; pedes fusci; alæ anticæ obscure fuscæ, ciliis elongatis nigricantibus. Long. 2½; alar. 5½ lin.

Phryganea funerea?, *Oliv. Latr. Hist. Nat. Ins.* xiii. 93.
Agapetus funereus, *Steph. Ill. Brit. Ent. Mand.* vi. 156, 1.

England.

2. AGAPETUS FUSCIPES.

Niger, supra tomentosus; pedes fusci, ochraceo maculati; alæ anticæ ochraceo-fuscæ, pilis pallidioribus. Long. 2⅓; alar. 5 lin.

Agapetus fuscipes, *Curt. Phil. Mag.* iv. 217. *Steph. Ill. Brit. Ent. Mand.* vi. 156, 2.
Agapetus ochripes, *Curt. Phil. Mag.* iv. 217, fœm.
Rhyacophila lanata, *Pictet, Rech. Phryg.* 194, 22, pl. 16, f. 18.

Europe.

3. AGAPETUS LANIGER.

Obscure fuscus, tomentosus, subtus ochraceus; pedes ochracei, antici nigricantes; alæ anticæ cinereo-ochraceæ, pilis pallidioribus. Long. 2⅓; alar. 5—5½ lin.

Rhyacophila lanigera, *Pictet, Rech. Phryg.* 195, 23, pl. 16, f. 19.
Agapetus laniger, *Steph. Ill. Brit. Ent. Mand.* vi. 156, 3.

Europe.

4. AGAPETUS COMATUS.

Niger, tomentosus, subtus ochraceo-fulvus; pedes ochracei; alæ anticæ canescentes, pilis subochraceis. Long. 2¼; alar. 5½ lin.

Rhyacophila comata, *Pictet, Rech. Phryg.* 194, 21, pl. 16, f. 17.
Agapetus comatus, *Steph. Ill. Brit. Ent. Mand.* vi. 157, 4.

Europe.

5. AGAPETUS SETIFERUS.

Obscure fuscus; antennæ ochraceæ, fusco annulatæ; pedes flavi; alæ cinereæ, sericeæ. Long. 2; alar. 5 lin.

Rhyacophila setifera, *Pictet, Rech. Phryg.* 197, 28, pl. 16, f. 24.
Agapetus setiferus, *Steph. Ill. Brit. Ent. Mand.* vi. 157, 5.

Europe.

6. AGAPETUS AZUREUS.

Niger; antennæ fuscæ; pedes ochracei; alæ anticæ atræ, nitidæ, posticæ atro-azureæ. Long. 2; alar. 5. lin.

Phryganea azurea? *Linn. Syst. Nat. ed.* 12, ii. 909, 12. *Faun. Suec.* 1491. *Cederh. Faun. Ingr. Prodr.* 139, 425. *De Vill. Ent.* iii. 32, 16. *Fabr. Sp. Ins.* i. 390, 15. *Mant. Ins.* i. 246, 18. *Ent. Syst.* ii. 79, 21. *Oliv. Enc. Méth.* 545, 24. *Gmel. ed. Syst. Nat.* i. 5, 2634. 12. *Turt. Syst. Nat.* iii. 397. *Latr. Hist. Nat.* xiii. 90.
Rhyacophila azurea, *Pictet, Rech. Phryg.* 193, 19, pl. 16, f. 16.
Agapetus azureus, *Steph. Ill. Brit. Ent. Mand.* vi. 157, 6.

Geneva.

Phryganea azurea, *Linn.*, is probably a species of Leptocerus.

Genus 6. RHYACOPHILA.

Tibiæ anticæ tricalcaratæ.

Rhyacophila, *Pictet, Rech. Phryg.* 181; *Steph. Ill. Brit. Ent. Mand.* vi. 165; *Westw.; Burm.; Ramb.*

Group 1.

Corpus gracile. Fœmina tibiis tarsisque intermediis non dilatatis.

1. RHYACOPHILA VULGARIS.

Fusco-ochracea; alæ hyalinæ, anticæ fusco subpunctatæ maculaque dorsali communi rhomboidali pallide flavescente. Long. 5—6; alar. 12—13 lin.

Rhyacophila vulgaris, *Pictet, Rech. Phryg.* 182, 1, pl. 15, f. 1. *Steph. Ill. Brit. Ent. Mand.* vi. 165, 1. *Burm. Handb. Ent.* ii. 909, 1.
Philopotamus dorsalis? *Curt. Phil. Mag.* iv. 213.
Nais plicata? *Ramb. Hist. Nat. Ins. Neur.* 505, 1.
England.

2. Rhyacophila stigma.

Pallide ochracea; antennæ et pedes fulvescentia; alæ fuscescentes, atomis flavescentibus, stigmate elongato fusco. Long. 5—6; alar. 12—15 lin.

Philopotamus longipennis? *Curt. Phil. Mag.* iv. 213.
Rhyacophila stigma, *Steph. Ill. Brit. Ent. Mand.* vi. 166, 2.
England.

3. Rhyacophila opaca.

Subfuscescente-ochracea; antennæ crassæ, breves, fulvescentes; pedes fulvescentes; alæ fuscescentes, ochraceo indistincte irroratæ, nebulis albidis. Long. 5; alar. 11½ lin.

Rhyacophila opaca, *Steph. Ill. Brit. Ent. Mand.* vi. 166, 3.
England.

Group 2.

Corpus latum. Fœmina tibiis tarsisque intermediis dilatatis.

4. Rhyacophila nebulosa.

Ochraceo-fusca; abdomen ochraceo cingulatum; pedes fulvescentes, coxis fuscescentibus; alæ subfusco-nebulosæ, anticæ apice subtruncatæ. Long. 6; alar. 13½ lin.

Rhyacophila nebulosa, *Steph. Ill. Brit. Ent. Mand.* vi. 166, 4.
England.

Group —?

5. RHYACOPHILA TORRENTIUM.

Nigro-fusca, subtus fulva; antennæ fulvo annulatæ; pedes fulvi; alæ anticæ cinereæ, guttis fulvis et fuscis maculaque postica rhomboidali alba. Long. 8 lin.

Rhyacophila torrentium, *Pictet, Rech. Phryg.* 184, 2, pl. 16, f. 1.

Geneva.

6. RHYACOPHILA TRISTIS.

Nigra; pedes subcinerei; alæ anticæ nigro-fuscæ. Long. 5 lin.

Rhyacophila tristis, *Pictet, Rech. Phryg.* 184, 3, pl. 16, f. 2.

Geneva.

7. RHYACOPHILA UMBROSA.

Nigra; pedes fulvi; alæ anticæ fuscæ, maculis auratis, venis nigris. Long. 4 lin.

Rhyacophila umbrosa, *Pictet, Rech. Phryg.* 185, 4, pl. 15, f. 2. *Burm. Handb. Ent.* ii. 909, 2.

Geneva.

8. RHYACOPHILA PUBESCENS.

Nigro-fusca; antennæ fuscæ; alæ anticæ subcinereæ, aureo-pilosæ, macula postica fusca. Long. 4 lin.

Rhyacophila pubescens, *Pictet, Rech. Phryg.* 186, 5, pl. 16, f. 3.

Geneva.

9. RHYACOPHILA ANGULARIS.

Nigra, nitens; pedes fulvi; alæ anticæ fuscæ, macula postica obscuriore. Long. 4 lin.

Rhyacophila angularis, *Pictet, Rech. Phryg.* 186, 6, pl. 16, f. 4.

Geneva.

10. RHYACOPHILA LÆVIS.

Nigra; pedes cinereo-fulvi; alæ anticæ nigricantes, iridescentes. Long. 3½ lin.

Rhyacophila lævis, *Pictet, Rech. Phryg.* 187, 7, pl. 16, f. 5.

Geneva.

11. RHYACOPHILA FLAVIPES.

Fusca; pedes flavi; alæ fuscescentes. Long. 4 lin.

Rhyacophila flavipes, *Pictet, Rech. Phryg.* 187, 8, pl. 16, f. 6.

Geneva.

12. RHYACOPHILA BIGUTTATA.

Nigra, subtus fusca; pedes fulvi; alæ anticæ fuscæ, macula media alba. Long. 4 lin.

Rhyacophila biguttata, *Pictet, Rech. Phryg.* 188, 9, pl. 16, f. 7.

Geneva.

13. RHYACOPHILA OBFUSCATA.

Nigra; antennæ fuscæ; pedes fulvi; alæ fuscæ, iridescentes. Long. 3½ lin.

Rhyacophila obfuscata, *Pictet, Rech. Phryg.* 188, 10, pl. 16, f. 8.

Geneva.

14. RHYACOPHILA LATIPENNIS.

Nigra, subtus fusca; antennæ fuscæ; abdomen apice fulvum; pedes flavi; alæ fulvæ, iridescentes. Long. 3 lin.

Rhyacophila latipennis, *Pictet, Rech. Phryg.* 189, 12, pl. 16, f. 10.

Geneva.

15. RHYACOPHILA VERNALIS.

Fusca; antennæ fulvo annulatæ; pedes fulvi; alæ anticæ subcinereæ ciliatæ, maculis posticis fulvis. Long. 4 lin.

Rhyacophila vernalis, *Pictet, Rech. Phryg.* 189, 13, pl. 15, f. 4. *Burm. Handb. Ent.* ii. 909, 3.

Geneva.

16. RHYACOPHILA NEBULOSA (bis lecta).

Nigra; pedes fulvi, femoribus medio nigris; alæ anticæ cinereæ, fulvo-hirtæ. Long. 4 lin.

Rhyacophila nebulosa, *Pictet, Rech. Phryg.* 190, 14, pl. 16, f. 11.

Geneva.

17. RHYACOPHILA MICROCEPHALA.

Nigra; antennæ fuscæ; pedes fulvi; alæ cinereæ, iridescentes. Long. 3 lin.

Rhyacophila microcephala, *Pictet, Rech. Phryg.* 191, 15, pl. 16, f. 12.

Geneva.

18. RHYACOPHILA DECOLORATA.

Fulva, supra fusca; antennæ apice nigricantes; alæ anticæ ciliatæ, immaculatæ. Long. 2½ lin.

Rhyacophila decolorata, *Pictet, Rech. Phryg.* 191, 16, pl. 16, f. 13.

Geneva.

19. RHYACOPHILA INCOLOR.

Nigra, subtus fusca; antennæ robustæ, fuscæ; pedes fulvi; alæ anticæ fulvæ, iridescentes. Long 2¼ lin.

Rhyacophila incolor, *Pictet, Rech. Phryg.* 192, 17, pl. 16, f. 14.

Geneva.

20. RHYACOPHILA LÆVIGATA.

Nigra; tibiæ fulvæ; alæ nigricantes, subiridescentes. Long. 2¼ lin.

Rhyacophila lævigata, *Pictet, Rech. Phryg.* 192, 18, pl. 16, f. 15.

Geneva.

21. RHYACOPHILA CILIATA.

Nigra, hirta ; antennæ robustæ ; pedes fulvi ; alæ anticæ cinereæ, aureo-pubescentes. Long. 3 lin.

Phryganea ciliata, *Mus. Lesk. Pars Ent.* 52, 39. *Gmel. ed. Syst. Nat.* 2637. *Oliv. Enc. Méth.* 560, 30.

Rhyacophila ciliata, *Pictet, Rech. Phryg.* 193, 20, pl. 15, f. 3.

Geneva.

22. RHYACOPHILA PENICILLUS.

Nigra, obscura ; palpi hirti ; pedes fusci ; alæ ciliatæ. Long. 2½ lin.

Rhyacophila penicillus, *Pictet, Rech. Phryg.* 193, 24, pl. 16, f. 20.

Geneva.

23. RHYACOPHILA BARBATA.

Nigra ; palpi subpilosi ; pedes fusci ; alæ nigricantes, fasciculis ciliatæ. Long. 2½ lin.

Rhyacophila barbata, *Pictet, Rech. Phryg.* 196, 26, pl. 16, f. 22.

Geneva.

24. RHYACOPHILA GRANULATA.

Nigra ; palpi breves ; pedes fusci, valde pilosi ; alæ anticæ subiridescentes, granulatæ. Long. 2 lin.

Rhyacophila granulata, *Pictet, Rech. Phryg.* 197, 29, pl. 16, f. 25.

Geneva.

25. RHYACOPHILA ARTICULARIS.

Nigra ; palpi hirti ; pedes fusci, articulis nigricantibus ; alæ anticæ subcinereæ, iridescentes, basi fulvæ. Long. 2½ lin.

Rhyacophila articularis, *Pictet, Rech. Phryg.* 198, 30, pl. 16, f. 26.

Geneva.

26. RHYACOPHILA IRRORELLA.

Rhyacophila irrorella, *Ramb. Hist. Nat. Ins. Neur.* 501.

France.

27. Rhyacophila armeniaca.

Nigro-fusca, subtus flavescens ; antennis, tibiis, tarsisque flavescentibus fusco cinctis ; alis anticis cinereis semihyalinis maculis fuscis et flavescentibus maculaque postica media obscuriore.

Rhyacophila armeniaca, *Guérin, Icon. Règne Anim. Texte*, 396.

Armenia.

28. Rhyacophila ? Wæneri.

Nigricans ; antennis pedibusque testaceis ; alis anticis cinereis, venarum longitudinalium duabus versus apicem furcatis, posticis hyalinis, omnibus margine interiori mediocriter ciliatis. Long. 1½ ; alar. 4½ lin.

Phryganea Wæneri, *Linn. Faun. Suec.* 1494. *Fabr. Ent. Syst. Suppl.* 201, 28. *Rossi, Faun. Etrusc.* 13, 682. *Zett. Ins. Lapp.* 1069, 37.

Sweden, Lapland.

29. Rhyacophila ? aureola.

Fusca ; antennis pedibusque testaceis ; alis anticis aureo-flavis, venarum longitudinalium duabus versus apicem furcatis, posticis cinerascentibus, omnibus margine interiori mediocriter ciliatis. Long. 1½ ; alar. 4 lin.

Phryganea aureola, *Zett. Ins. Lapp.* 1069, 38.

Lapland.

30. Rhyacophila ? griseola.

Fusca ; antennis pedibusque testaceis ; alis omnibus cinereis, margine interiori mediocriter ciliatis, anticis venarum longitudinalium duabus versus apicem elongato-furcatis. Long. 1¾ ; alar. 4¾ lin.

Phryganea griseola, *Zett. Ins. Lapp.* 1069, 39.

Lapland.

Fam. 7. HYDROPTILIDÆ.

Antennæ filiformes aut pectinatæ. Tibiæ calcaratæ.

Hydroptilidæ, *Steph. Ill. Brit. Ent. Mand.* vi. 151; *Burm.*
Hydroptilides, *Westw.*
Hydroptiloida, *Agassiz.*

Genus 1. HYDROPTILA.

Tibiæ anticæ non calcaratæ, intermediæ bicalcaratæ, posticæ quadricalcaratæ; calcares externa breviora: tibiæ posticæ unilateraliter fimbriatæ. Alæ anticæ anastamosi nulla: alæ posticæ anastomosi antica incompleta, postica nulla; fimbriæ longissimæ, in apice fasciculatæ: alæ apice acuminatæ. Antennæ ubique æquales, ante apicem nonnunquam paulo crassiores, articulis modice infibulatis.

Hydroptila, *Dalman, Act. Holm.* 1819, 1; *Pictet; Steph. Ill. Brit. Ent. Mand.* vi. 151; *Westw.; Burm.; Zett.; Kolenati, Gen. et Sp. Trich.* 104, 29, pl. 3, f. 29, ♂.

1. HYDROPTILA TINEOIDES.

Fusca; caput, antennæ et pedes pallida; alæ fuscæ, anticæ fasciis duabus punctoque apicali albis. Long. 1¼; alar. 2½ lin.

Hydroptila tineoides, *Dalm. Act. Holm.* 1819, i. 125, pl. 1, f. 4. *Analecta Ent.* 26, pl. 3. *Steph. Ill. Brit. Ent. Mand.* vi. 152, 1. *Zett. Ins. Lapp.* 1074, 1. *Kol. Gen. et Sp. Trich.* 105, 1. *Ramb. Hist. Nat. Ins. Neur.* 499, 1.
Hydroptila tineodes. *Burm. Handb. Ent.* ii. 2, 906, 1.
Hydroptila flavicornis, *Pictet, Rech. Phryg.* 225, 2, pl. 20, f. 11. *Guér. Icon. Règne Anim.* pl. 63, f. 12.
Hydroptila hirsutula, *Kollar.*

a, b. England.

2. Hydroptila brunneicornis.

Nigra; frons albus; antennæ flavo-fuscæ, annulis tribus fuscis, apice nigræ; alæ canescentes, anticæ marginibus albo nigroque punctatis. Long. 1; alar. 2¾—3 lin.

Hydroptila brunneicornis, *Pictet, Rech. Phryg.* 226, 3, pl. 20, f. 12. *Steph. Ill. Brit. Ent. Mand.* vi. 152, 2. *Kol. Gen. et Sp. Trich.* 106, 3.

H. recurva, *Dalm. Kol.*

a. England.

3. Hydroptila sparsa.

Fusco-nigra; frons canescens; antennæ et pedes fulva; alæ anticæ marginibus albo niveoque punctatis. Long. 1½; alar. 3 lin.

Hydroptila sparsa, *Curt. Phil. Mag.* iv. 217. *Steph. Ill. Brit. Ent. Mand.* vi. 152, 3.

England.

4. Hydroptila vectis.

Fusca; frons albida; abdomen subtus et pedes argenteo-micantia; alæ anticæ fascia media angulata punctisque variis ochraceis. Long. 1½; alar. 3¾ lin.

Hydroptila vectis, *Curt. Phil. Mag.* iv. 217. *Steph. Ill. Brit. Ent. Mand.* vi. 152, 4.

England.

5. Hydroptila costalis.

Pallide ochracea, nitida; alæ anticæ fusco variegatæ, ciliis costalibus elongatis nigris, areola centrali pallida. Long. 1—1⅓; alar. 3 lin.

Hydroptila costalis, *Curt. Phil. Mag.* iv. 217. *Steph. Ill. Brit. Ent. Mand.* vi. 153, 5.

England.

6. Hydroptila pulchricornis.

Antennæ annulis duobus fuscis.

Hydroptila pulchricornis, *Pictet, Rech. Phryg.* 224, 1, pl. 20, f. 10.
Kol. Gen. et Sp. Trich. 105, 2.
Hydroptila calorira, *Dalm. Kol.*

Europe.

7. Hydroptila fuscicornis.

Antennæ fuscæ, apice obscuriores.

Hydroptila fuscicornis, *Schneider, Ent. Zeit. Stett.* 1844, ii. 346, 46.
Hydroptila obscura, *Kol. Gen. et Sp. Trich.* 106, 4.

Sicily.

8. Hydroptila pumilio.

Tota fusca; pedibus flavo-testaceis; alis omnibus cinereis subpubescentibus margine distincte ciliatis, anticis venarum longitudinalium duabus versus marginem interiorem breviter furcatis. Long. ¾; alar. 2 lin.

Hydroptila pumilio, *Zett. Ins. Lapp.* 1074, 2.

Lapland.

9. Hydroptila? ambigua.

Nigra; alis anticis fusco-irroratis. Long. 1¼; alar. 3 lin.

Hydroptila ambigua, *Zett. Ins. Lapp.* 1074, 3.

Lapland.

10. Hydroptila lanceolata.

Hydroptila lanceolata, *Zett.*

Lapland.

11. Hydroptila tenebrosa.

Nigricans; antennæ fuscæ; pedes testacei; alæ nigro-cinereæ.

Blackish: antennæ brown: legs testaceous: wings blackish gray, fringed; veins black. Length of the body 1 line; of the wings 3 lines.

a—e. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

12. Hydroptila? parva.

Testacea; abdominis dorsum piceum; alæ albidæ.

Hydroptila parva, *Barnston, MSS.*

A mutilated specimen. Testaceous: abdomen pitchy above: wings whitish. Length of the body 1 line; of the wings 3 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

Genus 2. AGRAULES.

"Tibiæ anticæ non calcaratæ, intermediæ tricalcaratæ, posticæ quadricalcaratæ; calcares externa breviora: tibiæ posticæ unilateraliter pinnatæ. Alæ anticæ anastomosi antica incompleta, venis omnibus repræsentatis; anastomosis in alis posticis nulla; fimbriæ longissimæ: alæ apice acuminatæ. Antennæ ubique æquales, articulis infibulatis."

Agraylea, *Curt. Phil. Mag.* iv. 217; *Steph. Ill. Brit. Ent. Mand.* vi. 153; *Westw.*

Agraules, *Agassiz.*

Hydrorchestria, *Kolenati, Gen. et Sp. Trich.* 103, 28, pl. 3, f. 28, γ.

1. Agraules sexmaculata.

Ochracea; antennæ apice fuscæ; alæ anticæ fuscæ, maculis sex albidis. Long. —; alar. 4 lin.

Agraylea sexmaculata, *Curt. Phil. Mag.* iv. 217. *Steph. Ill. Brit. Ent. Mand.* vi. 153, 1.

Hydrorchestria sexmaculata, *Kol. Gen. et Sp. Trich.* 103, 1.

Europe.

2. AGRAULES MULTIPUNCTATA.

Fusca; vertex cinereus; facies, abdomen et pedes fulva; alæ anticæ maculis plurimis ochraceis: Long. — ; alar. 4 lin.

Agraylea multipunctata, *Curt. Phil. Mag.* iv. 217. *Steph. Ill. Brit. Ent. Mand.* vi. 153, 2.
Hydroptila argyricola, *Dalman, MSS.*
Hydrorchestria argyricola, *Kol. Gen. et Sp. Trich.* 104, 2.

Europe.

Genus 3. NARYCIA.

Antennæ pectinatæ.

Narycia, *Steph. Ill. Brit. Ent. Mand.* vi. 154; *Westw.*

1. NARYCIA ELEGANS.

Fusco-nigra; alæ anticæ nigræ, fusco variæ, punctis flavis, margine tenuiore maculis ochraceis. Long. 1½; alar. 4 lin.

Narycia elegans, *Steph. Ill. Brit. Ent. Mand.* vi. 154, 1, pl. 32, f. 4.

England.

Genus 4. PTILOCOLEPUS.

"Tibiæ utrinque pinnatæ, anticæ bicalcaratæ, intermediæ et posticæ quadricalcaratæ; calcares tibiarum anticarum brevia: Alæ anticæ cum areola discali clausa et anastomosi antica completa, postica incompleta: alæ posticæ anastomosi antica et postica semicompleta."

Ptilocolepus, *Kol. Gen. et Sp. Trich.* 102, 27, pl. 3, f. 27.

1. PTILOCOLEPUS TURBIDUS.

Ptilocolepus turbidus, *Kol. Gen. et Sp. Trich.* 102, 1.

Saxony.

The following Lepidopterous insect has been described as one of the Phryganides.

Fam. ACENTROPIDÆ.

Tibiæ non calcaratæ.

Acentropidæ, *Steph. Ill. Brit. Ent. Mand.* vi. 148.

Genus 1. ACENTROPUS.

Acentropus, *Curt. Brit. Ent.* xi. 497; *Steph. Ill. Brit. Ent. Mand.* vi. 150, 1; *Westw.*
Phryganea p., *Oliv.*; *Latr.*

1. ACENTROPUS NIVEUS.

Pallide rufo-ochraceus; caput et thorax canescentia; alæ sericeo-niveæ. Long. 2½—3; alar. 6—7½ lin.

Phryganea nivea, *Oliv. Latr. Hist. Nat. Crust. &c.* xiii. 93.
Acentropus Garnonsii, *Curt. Brit. Ent.* 497. *Westw. Trans. Ent. Soc. Lond.* i. 117.
Acentropus niveus, *Steph. Ill. Brit. Ent. Mand.* vi. 150, 1.
Europe.

Sub-order 2. PERLIDES.

Caput subtrigonum, antice obtusum, thoracis latitudine aut latius. Oculi subglobosi, prominentes. Ocelli 3, triangulum fingentes. Antennæ multi-articulatæ, setaceæ, remotæ, ante oculos insertæ, corpore vix breviores. Mandibulæ distinctæ. Palpi exerti, inflexi, filiformes aut setacei; palpi maxillares 5-articulati. Prothorax depressus, transverso-quadratus. Abdomen molle, elongatum, depresso-cylindricum, setis apicalibus multi-articulatis sæpe instructum. Pedes compressi; tibiis tarsisque elongato-cylindricis;

tarsis triarticulatis, articulo 1o longiore obconico. Alæ incumbentes; posticæ plerumque longiores, venosæ, abdominis duplo longitudine, margine interiore plicato.

Phryganea p., *Linn.*
Semblis p., *Fabr.*
Perla, *Geoffroy.*
Planipennes p., *Latr.*
Perlariæ p., *Latr.*
Perlidæ, *Leach; Steph.*
Megaloptera p., *MacLeay.*
Perlides, *Pictet.*

The five principal veins of each wing are the following: 1st, *the costal*, which forms the fore border; 2nd, *the subcostal*, which is parallel to the costal and not far from it; 3rd, *the median*, which springs immediately from the side of the subcostal, is in juxtaposition with it for a short space, then diverging divides the wing into two almost equal parts, and is bifurcate at two-thirds of its length; 4th, *the submedian*, which springs near the internal angle of the wing, and terminates in the middle of the hind border, and is bifurcate very near its beginning, its fore branch forming *the anterior submedian vein*, and its hind branch *the posterior submedian vein*; 5th, *the anal*, which is near the base, has a short course, and of which it is often difficult to distinguish between the principal and secondary branches. These veins divide the wing into four principal regions, which are thus named: 1st, *the marginal region*, comprised between the costal vein and the subcostal vein; 2nd, *the submarginal region*, between the subcostal and the median vein; 3rd, *the median region*, between the median vein and the anterior submedian vein; 4th, *the anal region*, which contains all the internal part of the wing between the lower submedian vein and the anal angle, and in which the vein of the same name ramifies. There is besides *the submedian areolet*, between the branches of the submedian vein. The principal line of transverse veins divides the 1st, 2nd and 3rd regions into two parts, the basilar part and the terminal part. The basilar part of the marginal region is divided longitudinally into two parts by the vein accessory to the costal, and thus contains three principal areolets, the external basilar areolet, the internal basilar areolet and the terminal areolet. In the hind-wings the submarginal region is divided longitudinally by a vein accessory to the median vein, not by one accessory to the subcostal.

Genus 1. KOLLARIA.

Palpi setacei. Alæ reticulatæ. Maxillæ capite longiores. Palpi maxillares longissimi.

Kollaria, *Pictet, Hist. Nat. Perl.* 114.

Maxillary palpi very long and slender: mandibles small: maxillæ formed of two processes; one internal, small, slender, terminated by three bristles; the other external, large, curved, longer than the head, dentated at the tip: labium very slender: wings large, strongly reticulated over nearly the whole surface: tail-bristles long.

1. KOLLARIA INSIGNIS.

Kollaria insignis, *Pictet, Hist. Nat. Neur. Perl.* 123, pl. 4.

Genus 2. EUSTHENIA.

Palpi setacei. Alæ reticulatæ. Maxillæ mediocres, capite breviores. Palpi maxillares mediocres, non dilatati, articulis 1o et 2o brevissimis.

Eusthenia, *Westw.; Gray, Griff. Anim. Kingd.* xv. 348, pl. 72, f. 4.

Maxillary palpi of moderate length; their 1st and 2nd joints very short; 3rd and 4th long, not dilated; 5th ovate, straight: mandibles of moderate length: maxillæ large, not altogether extending beyond the mouth: wings large, strongly reticulated over nearly the whole surface; 8th abdominal segment furnished beneath in the female with a large median and slightly recurved prolongation: tail-bristles long.

1. EUSTHENIA SPECTABILIS.

Eusthenia spectabilis *(Westw. MSS.), Gray, Griff. Anim. Kingd.* x. 348, pl. 72, f. 4. *Pictet, Hist. Nat. Neur. Perl.* 139, pl. 5, f. 1—5.

a. New Holland. Presented by the Entomological Club.
b. Van Dieman's Land. Presented by R. Butler, Esq.
c. Van Dieman's Land. Presented by R. T. Ewing, Esq.
d. New Holland. From the Rev. J. Wenham's collection.
e. Van. Dieman's Land. From Mr. Westwood's collection.
f. Van Dieman's Land. From Lieut. Ross's collection.

2. Eusthenia Thalia.

Subnigra; pedes nigri, femora basi testacea, tibiæ prope basin testaceo annulatæ.

Eusthenia Thalia, *Newm. Mag. Nat. Hist. New Series*, iii. 33, 1.
Pteronarcys Thalia, *Pictet, Hist. Nat. Neur. Perl.* 132, 3, pl. 5, f. 6—8.

Van Dieman's Land.

3. Eusthenia diversipes.

Eusthenia diversipes, *Westw.*

Genus 3. PTERONARCYS.

Palpi setacei. Alæ reticulatæ. Maxillæ parvæ. Palpi maxillares mediocres, dilatati, articulo 1o brevissimo.

Pteronarcys, *Newman, Entomological Magazine*, v. 175.

Maxillary palpi of moderate length; first joint short; second, third and fourth longer, dilated outwardly; fifth cylindrical, slightly recurved: mandibles and maxillæ hidden, very small: wings large, strongly reticulated over nearly the whole surface: eighth abdominal segment furnished beneath in the female (at least of some species) with two projecting and recurved ungulæ: tail-bristles long.

1. Pteronarcys Proteus.

Fusca; caput, prothorax, mesothorax et metathorax linea communi longitudinali interrupta flava signata; abdominis segmenta postice flava, 7um subtus inerme; alæ hyalinæ fusco variegatæ; pedes fusci, genubus flavis.

Pteronarcys Proteus, *Newm. Ent. Mag.* v. 177, 3. *Pictet, Hist. Nat. Neur. Perl.* 128, 1, pl. 6, f. 1—6. *Ramb. Hist. Nat. Ins. Neur.* 449.

a. New-York. Presented by the Entomological Club.
b—e. Trenton Falls. Presented by E. Doubleday, Esq.
f. District watered by the Mackenzie River. Presented by Sir J. Richardson.

2. Pteronarcys reticulata.

Perla reticulata, *Burm. Handb. Ent.* ii. 879.
Pteronarcys reticulata, *Pictet, Hist. Nat. Neur. Perl.* 130, 2, pl. 6, f. 7, 8.

Siberia.

3. Pteronarcys regalis.

Fusca; caput, prothorax, mesothorax et metathorax linea communi longitudinali flava signata; abdominis segmenta postice flava; alæ hyalinæ fusco tinctæ; pedes fusci, genubus concoloribus.

Pteronarcys regalis, *Newm. Ent. Mag.* v. 176. *Ann. Nat. Hist.* xiii. 21. *Pictet, Hist. Nat. Neur. Perl.* 134, 4. *Ann. Sci. Nat.* i. 183. *Froriep, N. Notizen*, xxx. 179.

a, b. Canada. Presented by the Entomological Club.
c—e. District watered by the Mackenzie and Slave Rivers. Presented by Sir J. Richardson.
f, g. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.
h. North America.

4. Pteronarcys biloba.

Fusca; caput, prothorax et mesothorax concoloria; metathorax linea longitudinali flava; abdominis segmentum 7um subtus lobis duobus conicis auctum; alæ hyalinæ fusco variegatæ; pedes fusci, genubus concoloribus.

Pteronarcys biloba, *Newm. Ent. Mag.* v. 176, 2. *Pictet, Hist. Nat. Neur. Perl.* 135, 5.

a. Trenton Falls. Presented by the Entomological Club.
b. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.
c. North America.

5. Pteronarcys Californica.

Capite thoraceque saturate fuscis; fronte, clypeo, labroque rufis; oculis ocellisque nigris; segmentis thoracis linea longitudinali interrupta flava; abdomine aurantiaco lateribus fuscis; setis caudalibus basi flavis; antennis pedibusque totis atris; alis obscuris nigro venosis, sed absque macula stigmaticali.

Pteronarcys Californicus, *Newport, Proc. Linn. Soc.* (1848) i. 388.

a. California. From M. Hartweg's collection.

Genus 4. PERLA.

Palpi setacei. Alæ venosæ.

Perla, *Geoffroy; Fabr.; Latr.; Newman; Curt.; Steph.; Pictet; Burm.*

Diura, *Billberg.*

Maxillary palpi of moderate length; first joint short; second, third, and fourth larger, not dilated; fifth straight: mandibles and maxillæ of moderate size, or small: wings veined, with only a few cross-veins; eighth abdominal segment without an inferior prolongation in the female: tail-bristles long.

Group 1. DICTYOPTERYX.

Caput parvum. Alæ rotundatæ. Venæ longitudinales sæpe irregulares. Regionis submarginalis pars terminalis venis transversis divisa. Alarum posticarum regio analis magna, plicata.

Dictyopteryx, *Pictet, Hist. Nat. Neur. Perl.* 143.

Anal region of the hind-wings large, folded; terminal part of the submarginal region divided by cross-veins; longitudinal veins of this same part often irregular: head small: maxillæ multidentate: wings large, rounded. Colour of the body almost always black, with a yellow stripe on the head and on part of the thorax.

1. Perla intricata.

Flava; prothorax longitudine multo latius, vitta flava; alæ obscure fuscæ, dense reticulatæ, regione submarginali irregulariter reticulata.

Perla intricata, *Pictet, Hist. Nat. Neur. Perl.* 152, 1, pl. 7, f. 1—8. *Ramb. Hist. Nat. Ins. Neur.* 452, 5.

Chamounix.

2. Perla microcephala.

Flava; prothorax longitudine multo latius, vitta flava; alæ pallide fuscæ, mediocriter reticulatæ.

Perla bicaudata? *Linn. Syst. Nat. ed.* 12, 908, 1. *Faun. Suec.* 1489. *Gmel. ed. Syst. Nat.* i. 2631, 1. *Barbut, Gen.* 216. *Berk. Syn.* i. 150. *Stew. Elem. Nat. Hist.* ii. 213. *Turt. Syst.*

Nat. iii. 395. *De Vill. Linn. Ent.* iii. 24, 1. *Cederhielm, Faun. Ingr. Prodr.* 136, 414.
Semblis bicaudata? *Fabr. Ent. Syst.* ii. 73, 8.
Semblis bicaudata, *Panz. Faun. Ins.* lxxxi. 4.
Perla bicaudata, *Geoffr. Hist. Nat.* ii. 230, 1, pl. 13, f. 2. *Fourcr. Ent. Par.* 349, 1. *Latr. Hist. Nat. Ins.* xiii. 49, 2. *Règne Anim. Cuv.* v. 158. *Steph. Ill. Brit. Ent. Mand.* vi. 136, 3. *Zett. Ins. Lapp.* 1057. *Guér. Icon. Règne Anim. Ins.* pl. 63, f. 6.
Diura bicaudata, *Billberg.*
Perla microcephala, *Pictet, Ann. Sci. Nat.* xxviii. pl. 6, f. 4, 5. *Hist. Nat. Neur. Perl.* 155, 2, pl. 7, f. 9—13. *Burm. Handb. Ent.* ii. 878, 2.
Perla Cymodoce, *Newm. Mag. Nat. Hist.* iii. 37.
Perla Parisina, *Ramb. Hist. Nat. Ins. Neur.* 450, 1.
Perla proxima, var.? *Ramb. Hist Nat. Ins. Neur.* 451, 2.
Perla dispar, var.? *Ramb. Hist. Nat. Ins. Neur.* 451, 3.
Perla dubia, var.? *Ramb. Hist. Nat. Ins. Neur.* 453, 6.
Perla angustata, var.? *Ramb. Hist. Nat. Ins. Neur.* 453, 8.

a—d. Dartmoor. From Dr. Leach's collection.
e—h. England.
i. France.
j. South France.

3. PERLA RECTANGULA.

Flava; prothorax longitudine multo latius, vitta flava; regio submarginalis rectangulis sat regularibus reticulata.

Perla rectangula, *Pictet, Hist. Nat. Neur. Perl.* 159, 3, pl. 8, f. 1—3.
Turin.

4. PERLA HISPANICA.

Perla hispanica, *Ramb. Hist. Nat. Ins. Neur.* 452, 4.
Madrid.

5. PERLA MALACCENCIS.

Perla Malaccensis, *Ramb. Hist. Nat. Ins. Neur.* 453, 7.
Malaga.

6. PERLA ALPINA.

Fusca; prothorax longitudine vix latius, vitta flava; alæ subfuscæ, apud costam fulvæ.

Perla alpina, *Pictet, Hist. Nat. Neur. Perl.* 161, 4, pl. 8, f. 4—7.
Swiss Alps.

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7. PERLA VENTRALIS.

Fusca; prothorax longitudine vix latius, vitta flava; alæ limpidæ, apud costam læte flavæ..

Perla ventralis, *Pictet, Hist. Nat. Neur. Perl.* 164, 5, pl. 8, f. 8, 9.
Balkan.

8. PERLA IMHOFFII.

Læte fusca; prothorax non vittatus.

Perla Imhoffii, *Pictet, Hist. Nat. Neur. Perl.* 166, 6, pl. 9, f. 9, 10.
Basle.

Group 2. ISOGENUS.

Nigra, vitta flava. Alæ macula apud stigma nebulosa; vena subcostalis accessoria valde ramosa et irregularis; regionis submarginalis pars terminalis venis transversis non divisa. Alæ posticæ regione anali magna, plicata.

Isogenus p., *Newman, Ent. Mag.* i. 415. Sexuum amborum alis pariter repandis, pariterque abdomen tegentibus; telo setis duabus instructo.
Nephelion, *Pictet, Hist. Nat. Neur. Perl.* 144, 3.

Terminal part of the submarginal region without cross-veins; accessory vein of the subcostal vein much ramified and very irregular. Species with a black body, which has almost always the yellow stripe, with the likeness of *Dictyopteryx;* they are also characterized by a blackish clouded spot on the side where the principal line of the cross-veins terminates.

9. PERLA NUBECULA.

Caput macula flava occipitali; frons omnino nigra; prothorax longitudine paullo latius, vitta flava; alæ anticæ sordide hyalinæ, nubecula costali ultra medium fusca.

Perla bicaudata, *St. Farg. et Serv. Enc. Méth. Ins.* x. 69, 1. *Dum. Cons. Gén. Ins.* pl. 27, f. 10. *Pictet, Ann. Sci. Nat.* xxviii. pl. 6, f. 6, 7. *Burm. Handb. Ent.* ii. 878.
Perla nubecula, *Pictet, Hist. Nat. Neur. Perl.* 170, 7, pl. 9, f. 1—6.

Isogenus nebecula, *Newm. Ent. Mag.* i. 415. *Steph. Ill. Brit. Ent. Mand.* vi. 137, 1, pl. 31, f. 4.

a. England.
b. ——— ?

10. PERLA FRONTALIS.

Fusca; caput macula flava occipitali; frons macula V-flava; prothorax longitudine paullo latius, vitta flava; alæ anticæ hyalinæ, fusco tinctæ, nubecula costali ante medium vix conspicua fusca.

Isogenus frontalis, *Newm. Ent. Mag.* v. 178. *Mag. Nat. Hist.* iii. 85.
Perla bicaudata, *Kirby, Faun. Bor. Amer. Ins.* 252.
Perla frontalis, *Pictet, Hist. Nat. Neur. Perl.* 172, 8, pl. 8, f. 10, 11.

a—*c*. Trenton Falls. Presented by the Entomological Club.
d. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

11. PERLA POSTICA.

Atra, nitens; caput thorace vix latius, maculis tribus flavis; prothorax flavo vittatus, antice bicornis; alæ subhyalinæ.

Black, shining: head a little broader than the thorax, with a yellow triangular spot on the hind-border, and a pale yellow spot on each side in front of the antennæ: prothorax very rugulose, with a yellow stripe along the longitudinal furrow, produced into an acute angle or short horn on each side by the fore-angle, hardly broader in front; sides almost straight; angles rather sharp: wings subhyaline; veins black; external basilar areolet with five transverse veins; terminal areolet with four transverse veins; submedian areolet with six or seven? transverse veins. Length of the body 5 lines; of the wings 16 lines.

a. Mackenzie River, Arctic America. Presented by Sir John Richardson.

12. PERLA OLIVACEA.

Piceo-nigra; caput thorace vix latius, macula triangulari margineque postico flavis; prothorax rugulosus, vitta flava, lateribus rectis, angulis sat acutis; alæ subcinereæ.

Perla olivacea, *Barnston, MSS.*

Pitchy black: head hardly broader than the thorax, yellow beneath and at the base of the antennæ, and with a yellow triangular spot on the hind-border, which is also yellow: prothorax rugulose, with a yellow middle stripe, not broader in front; sides straight; angles rather sharp; under side yellow: wings very slightly gray; veins black; external basilar areolet with six transverse veins; terminal areolet with two transverse veins; terminal part of the submarginal areolet with no transverse veins; submedian areolet with six transverse veins. Length of the body 4 lines; of the wings 12 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

13. PERLA MEDIA.

Nigra; caput thorace paullo latius, lateribus, margine postico, maculisque duabus flavo-ferrugineis; prothorax valde rugulosus, antice multo latius, sulco dorsali, angulis anticis sat acutis, posticis rotundatis; alis subcinereis.

Perla media, *Barnston, MSS.*

Black: head a little broader than the thorax, ferruginous mixed with yellow on each side and behind, and with two spots of that colour diverging from each other on the vertex towards the fore-border: scutum very rugulose, with a slight middle furrow, much broader in front; hind-angles rounded; fore-angles rather sharp: wings very slightly gray; veins black; external basilar areolet with thirteen transverse veins; terminal areolet with three transverse veins; terminal part of the submarginal areolet with no transverse veins; submedian areolet with eight transverse veins. Length of the body 5 lines; of the wings 16 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

14. PERLA NUBES.

Caput macula flava occipitali; prothorax omnino niger, longitudine paullo latius.

Perla nubes, *Pictet, Hist. Nat. Neur. Perl.* 174, 9, pl. 9, f. 7, 8.

America.

15. Perla Servillei.

Caput macula nulla occipitali ; prothorax longitudine multo latius.

Perla Servillei, *Pictet, Hist. Nat. Neur. Perl.* 175, 10, pl. 9, f. 11—14.

Egypt.

Div.?

16. Perla Ligea.

Fusca ; facies testacea ; abdomen testaceum, lateribus saturatioribus ; alæ vix hyalinæ, croceo-fusco tinctæ.

Isogenus Ligea, *Newm. Mag. Nat. Hist. new series*, iii. 84, 1.

——— ?

17. Perla Clio.

Fusca ; capitis latera circa oculos flavida ; prothorax linea mediana longitudinali flavida ; abdomen testaceum.

Isogenus Clio, *Newm. Mag. Nat. Hist. new series*, iii. 86, 7.

a, *b*. Georgia. From Mr. Abbot's collection.

18. Perla Drymo.

Fusca ; caput testaceum, clypeo maculaque quadrata postica fuscis ; prothorax fuscus, maculis duabus magnis læte testaceis signatus ; femora basi pallidiora.

Isogenus Drymo, *Newm. Mag. Nat. Hist. new series*, iii. 86, 6.

a, *b*. Georgia. From Mr. Abbot's collection.

Group 3. ACRONEURIA.

Caput magnum. Alæ elongatæ. Venæ longitudinales regulares. Regionis submarginalis pars terminalis venis transversis divisa. Alarum posticarum regio analis magna, plicata.

Acroneuria, *Pictet, Hist. Nat. Neur. Perl.* 144.

Terminal part of the submarginal region divided by cross-veins ; longitudinal veins of this same part regular : head large : maxillæ unidentate. Species with elongate wings, and with the likeness of the group *Perla*.

19. Perla arenosa.

Perla arenosa, *Pictet, Hist. Nat. Neur. Perl.* 178, 11, pl. 10, f. 1, 2.
North America.

20. Perla Pennsylvanica.

Perla Pennsylvanica, *Ramb. Hist. Nat. Ins. Neur.* 456, 13.
Philadelphia.

21. Perla abnormis.

Fusca, fere concolor; alæ fuscescentes, superne apicibus reticulatæ.

Perla abnormis, *Newm. Ent. Mag.* v. 177. *Pictet, Hist. Nat. Neur. Perl.* 180, 12.

a. Trenton Falls. Presented by the Entomological Club.

Group 4. PERLA.

Alæ apud stigma non maculatæ. Vena subcostalis accessoria simplex, aut regulariter unifurcata vel bifurcata. Areola marginalis apicalis venis duabus aut pluribus transversis.

Perla, *Pictet, Hist. Nat. Neur. Perl.* 144, 4.

Terminal part of the submarginal region without cross veins; accessory vein of the subcostal vein without ramifications, or with one or two regular bifurcations; marginal terminal areolet with at least two transverse veins. Species of a large or middle size, of a more or less deep brown or yellowish colour.

Sub-group 1.

Species plus minusve obscure fuscæ, magnæ vel mediocres. Prothorax lateribus rectis angulisque acutis. Alæ subfuscæ vel subfulvæ, venis robustis.

Species of large or moderate size: prothorax with straight sides and sharp angles: wings with a brown or a tawny tinge, strongly veined: general colour more or less deep brown.

Div. 1.

Areola costalis vix areolis reliquis colore diversa.

Subdiv. 1.

Alæ æqualiter hyalinæ vel opacæ.

Sect. 1.

Prothorax rufescens, linea marginali nigra. Alæ flavido-fuscæ.

Subsect. 1.

Prothorax guttis maculisve duabus nigris.

22. PERLA BIPUNCTATA.

Venæ fuscæ, robustæ.

Perla bipunctata, *Pictet, Ann. Sci. Nat.* xxviii. (1833), 12, pl. 5, f. 12—14. *Hist. Nat. Neur. Perl.* 187, 13, pl. 11, 12.
Perla bicaudata, *Newm. Mag. Nat. Hist.* iii. 35.
Perla cephalotes, *Burm. Handb. Ent.* ii. 880.

a, *b*. England. Presented by J. C. Dale, Esq.
c. England.

23. PERLA PALLIDA.

Venæ flavescentes.

Perla pallida, *Guér. Icon. Règne Anim. Ins.* pl. 63, f. 5. *Texte*, 393. *Pictet, Hist. Nat. Neur. Perl.* 192, 14, pl. 13, f. 8.

Caucasus.

Subsect. 2.

Prothorax maculis nigris nullis.

24. PERLA IMPUNCTATA.

Perla impunctata, *Pictet, Hist. Nat. Neur. Perl.* 194, 15, pl. 13, f. 9.

Rome.

Sect. 2.

Prothorax nigricans. Alæ obscure fuscæ.

Subsect. 1.

Alæ semibyalinæ, venis robustis. Abdomen fusco varium.

25. PERLA CEPHALOTES.

Prothorax parvus, capite angustior.

Perla cephalotes, *Curt. Brit. Ent.* iv. pl. 100. *Steph. Ill. Brit. Ent. Mand.* vi. 136, 2. *Newm. Mag. Nat. Hist.* iii. 36. *Pictet, Hist. Nat. Neur. Perl.* 196, 16, pl. 14, 15.

Perla bipunctata, *Rœmer, Gen.* pl. 24, f. 8. *Sulzer, Abgek. Geschichte*, pl. 24, f. 8. *Burm. Handb. Ent.* ii. 881, 15.

a. ——? From Mr. Children's collection.

26. PERLA MARGINATA.

Magna; caput et prothorax fusco varia; caput obscure fuscum, macula nigra non bene determinata; prothorax magnus, capitis latitudine; venæ fuscæ; abdomen fulvum, fusco-obscurum; setæ caudales alis occultæ.

Perla marginata, *Muraldt, Ephem. Nat. Cur. Dec.* 2, *An.* 2, 1683, 191, f. 16—19. *Fabr. Ent. Syst.* ii. 73, 7. *Hummel, Essais Ent.* 2. *Pictet, Ann. Sci. Nat.* xxviii. pl. 5, f. 1—3. *Hist. Nat. Neur. Perl.* 200, 17, pl. 16, f. 1—4; pl. 17, f. 1, 2. *Steph. Ill. Brit. Ent. Mand.* vi. 135, 1. *Newm. Mag. Nat. Hist.* iii. 35. *Zett. Ins. Lapp.* 1057, 1. *Burm. Handb. Ent.* ii. 880, 11.

Perla bicaudata, *Sulzer, Ins.* pl. 17, f. 104.

Perla maxima, *Scopoli, Ent. Carn.* 269, 705.

Perla grandis, *Ramb. Hist. Nat. Ins. Neur.* 454, 9.

Semblis marginata, *Panz. Faun. Ins. Germ.* lxxi. 3.

Phryganea marginata, *Turt. Syst. Nat.* iii. 395.

a. Dartmoor. From Dr. Leach's collection.

b. Rheinwald. Presented by the Entomological Club.

c. ——?

27. Perla abdominalis.

Magna ; caput et prothorax omnino nigra ; prothorax magnus, capitis latitudine ; venæ fuscæ ; abdomen fulvum, fusco-obscurum ; setæ caudales alis non occultæ.

Perla abdominalis, *Burm. Handb. Ent.* ii. 881, 14. *Schæff. Icon. Ins. Ratisb.* p. 160, f. 2, 3. *Pictet, Hist. Nat. Neur. Perl.* 204, 18, pl. 16, f. 5—7. *Guér. Icon. Règne Anim. Texte*, 394.

a. ——— ?

28. Perla Barcinonensis.

Perla Barcinonensis, *Ramb. Hist. Nat. Ins. Neur.* 454, 10.

Barcelona.

29. Perla Madritensis.

Perla Madritensis, *Ramb. Hist. Nat. Ins. Neur.* 455, 11.

Madrid.

30. Perla Bœtica.

Perla Bœtica, *Ramb. Hist. Nat. Ins. Neur.* 455, 12.

Malaga.

31. Perla capitata.

Parva ; caput flavum, macula valde distincta nigra ; thorax nigricans ; prothorax magnus, capitis latitudine ; abdomen fulvum, fusco-obscurum ; venæ fuscæ.

Perla capitata, *Pictet, Hist. Nat. Neur. Perl.* 214, 23, pl. 18, f. 4, 5.

United States.

32. Perla Coulonii.

Maxima ; caput macula nigra bene determinata ; prothorax magnus, capitis latitudine ; abdomen fere thoracis colore ; venæ fuscæ.

Perla Coulonii ? *Pictet, Hist. Nat. Neur. Perl.* 212, 22, pl. 10, f. 4.

a, *b*. District watered by the Mackenzie and Slave Rivers. Presented by Sir J. Richardson.

33. Perla Caucasica.

Mediocris; capitis macula non bene determinata; prothorax magnus, capitis latitudine; abdomen fere thoracis colore; venæ fuscæ.

Perla Caucasica, *Guér. Icon. Règne Anim. Texte*, 394. *Pictet, Hist. Nat. Neur. Perl.* 206, 19, pl. 17, f. 4.

Caucasus.

34. Perla tibialis.

Prothorax magnus, capitis latitudine; venæ aureo-flavæ.

Perla tibialis, *Pictet, Hist. Nat. Neur. Perl.* 217, 25, pl. 18, f. 6, 7.

Japan.

Subsect. 2.

Abdomen omnino flavum. Alæ fere opacæ, venis vix conspicuis.

35. Perla Ferreri.

Perla Ferreri, *Pictet, Hist. Nat. Neur. Perl.* 210, 21. pl. 18, f. 1, 2.

Turin.

Subdiv. 2.

Alæ fuscæ, opacæ, areolarum discis limpidioribus.

36. Perla Brasiliensis.

Perla Brasiliensis, *Kollar, MSS. Pictet, Hist. Nat. Neur. Perl.* 216, 24, pl. 18, f. 3.

Brazil.

Div. 2.

Areola costalis areolis reliquis multo magis colorata.

37. Perla Selysii.

Alæ concinne fuscæ.

Perla Selysii, *Pictet, Hist. Nat. Neur. Perl.* 208, 20, pl. 17, f. 5.

Liège.

38. Perla limbata.

Abdomen rufescens; pedes fusci; alæ obscure fuscæ.

Perla limbata, *Pictet, Hist. Nat. Neur. Perl.* 219, 26, pl. 19, f. 1—5.

Japan.

39. Perla infuscata.

Fusca; pedes nigri; alæ nigricantes, costis omnibus flavis.

Isogenus infuscatus, *Newm. Ent. Mag.* v. 499; *Mag. Nat. Hist.* iii. 85; *Zool.* iii. 852.

Perla infuscata, *Pictet, Hist. Nat. Neur. Perl.* 221, 27, pl. 19, f. 6—11.

a. Hong-Kong. Presented by J. C. Bowring, Esq.
b. North China. From Mr. Fortune's collection.
c. China. From Mr. Stevens's collection.

40. Perla Lycorias.

Perla Lycorias, *Newm. Mag. Nat. Hist.* iii. 85. *Pictet, Hist. Nat. Neur. Perl.* 214.

a. Trenton Falls. Presented by the Entomological Club.

41. Perla internata.

Fuscescens, subtus flava; caput thorace paullo latius, fasciis duabus undatis flavo signatis luteis; antennæ fulvæ; prothorax rugulosus, lateribus rectis vittaque testaceis, angulis acutis; pedes fulvi; alæ subhyalinæ.

Brownish, yellow beneath: head a little broader than the thorax, with two undulating yellow-marked luteous bands on the disk:

antennæ dull tawny, paler towards the base: prothorax somewhat rugulose, slightly testaceous on each side, and with a testaceous dorsal stripe, increasing in breadth from the hind angles to the fore angles; sides straight; angles sharp: legs dull tawny: caudal appendages tawny, pubescent: wings subhyaline; veins testaceous; the external basilar areolet has eighteen transverse veins, and the terminal has six; the terminal part of the submarginal region has two transverse veins; the submedian areolet has seven transverse veins. Length of the body 6 lines; of the wings 26 lines.

a. North America? Presented by the Entomological Club.

42. PERLA INTERMIXTA.

Flava; capitis et prothoracis latera fuscescentia; caput thorace non latius; prothorax subrugulosus, antice paullo latius, lateribus subconvexis, angulis subobtusis; pedes testacei; alæ subhyalinæ.

Yellow: head and thorax brownish along each side; head not broader than the thorax: prothorax slightly rugulose, a little broader in front; sides slightly convex; angles rather obtuse: legs dull testaceous: caudal appendages pale testaceous: wings subhyaline; veins testaceous; external basilar areolet with sixteen transverse veins; terminal areolet with five transverse veins; terminal part of the submarginal region with no transverse veins; submedian areolet with six transverse veins. Length of the body 6 lines; of the wings 28 lines.

a. Venezuela. From Mr. Dyson's collection.

43. PERLA TRIJUNCTA.

Lutea, fulvo varia, subtus flava; caput thorace vix latius; prothorax rugulosus, sulcatus, antice paullo latius, lateribus rectis, angulis acutis; alæ subhyalinæ.

Luteous, partly tawny, yellow beneath: head very little broader than the thorax: prothorax rugulose, with a slight middle furrow, little broader in front; sides straight; angles sharp: wings subhyaline; veins testaceous; external basilar areolet with twenty transverse veins; terminal areolet with six transverse veins; terminal part of the submarginal region with no transverse veins; submedian areolet with eight transverse veins. Length of the body 9 lines; of the wings 28 lines.

a. Georgia. From Mr. Abbot's collection.

44. Perla suffusa.

Fulva, subtus testacea; caput prothorace latius, disco fusco, maculis tribus marginisque antici lateribus testaceis; antennæ nigræ; prothorax subrugulosus, antice multo latius, margine antico fusco, lateribus rectis, angulis acutis; scutellum maculis tribus flavis; alæ subfuscæ.

Tawny, testaceous beneath: head broader than the thorax; disk brown, including three testaceous spots; fore border testaceous on each side: antennæ black: prothorax minutely rugulose, much broader in front, brown along the fore border; sides straight; angles sharp: scutellum with three pale yellow spots in front: wings pale brown; veins ferruginous; external basilar areolet with twelve transverse veins; terminal areolet with seven transverse veins; terminal part of the submarginal areolet with no transverse veins; submedian areolet with eight transverse veins. Length of the body 8 lines; of the wings 22 lines.

a, b. Nepaul. From the Hardwicke bequest.

45. Perla Æthiops.

Atra; caput thorace vix latius; prothorax subrugulosus, subsulcatus, antice latius, lateribus convexis, angulis sat acutis; alæ nigro-fuscæ.

Deep black: head hardly broader than the thorax: prothorax minutely rugulose, with a slight longitudinal furrow, broader in front, convex or almost angular on each side; angles rather sharp: wings dark brown; veins black; external basilar areolet with fifteen transverse veins; terminal areolet with three transverse veins; terminal part of the submarginal areolet with no transverse veins; submedian areolet with seven or eight transverse veins. Length of the body 6 lines; of the wings 18 lines.

a. Mexico. From M. Hartweg's collection.

46. Perla luteicollis.

Atra, nitens; caput læve, thorace non latius; prothorax luteus, subrugulosus, subsulcatus, antice latius, lateribus rectis, angulis anticis acutis posticis obtusis; alæ nigro-fuscæ.

Deep black, shining: head smooth, not broader than the thorax: scutum luteous, minutely rugulose, with a slight longitudinal

furrow, broader in front, straight on each side; hind angles rounded; fore angles sharp: wings dark brown; veins black; external basilar areolet with ten transverse veins; terminal areolet with two transverse veins; submedian areolet with six transverse veins. Length of the body 5 lines; of the wings 10 lines.

a. Venezuela. From Mr. Dyson's collection.

Sub-group 2.

Species mediocres. Prothorax fuscus, rugosus, lateribus rectis. Alæ omnino hyalinæ et limpidæ, venis fuscis.

Species of moderate size: prothorax with straight sides, brown, rugose: wings quite transparent and colourless, with brown veins.

47. PERLA VITRIPENNIS.

Perla vitripennis, *Burm. Handb. Ent.* ii. 880, 10. *Pictet, Hist. Nat. Neur. Perl.* 224, 28, pl. 20, f. 1, 2.

Germany.

48. PERLA BICOLOR.

Perla bicolor, *Burm. Handb. Ent.* ii. 880, 9. *Pictet, Hist. Nat. Neur. Perl.* 226, 29, pl. 20, f. 3, 4.

France, Germany.

49. PERLA TERMINALIS.

Nigra, subtus lutea; caput thorace vix latius, margine antico lateribusque luteis; antennæ nigræ; prothorax subrugulosus, antice paullo latius, submarginatus, subsulcatus, lateribus rectis, angulis acutis; alæ hyalinæ.

Black, luteous beneath: head very little broader than the thorax, luteous on each side and in front: antennæ black, testaceous towards the base: prothorax minutely rugulose, a little broader in front, with a slight border and a slight middle furrow; sides straight; angles sharp: wings hyaline; veins blackish brown; external basilar areolet with seventeen transverse veins; terminal areolet with four transverse veins; terminal part of the submarginal areolet with no transverse veins; submedian areolet with seven transverse veins,

the seventh forked. Length of the body 5 lines; of the wings 18 lines.

a, *b*. East Indies. Presented by J. W. Evans, Esq.

Sub-group 3.

Species magnitudine variæ. Prothorax semper bicolor, angulis rotundatis.

Species above or below the middle size: prothorax with rounded angles, always of two colours.

Div. 1.

Prothorax fuscus vel niger, flavo marginatus.

50. PERLA CINCTA.

Alæ unicolores.

Perla cincta, *Pictet, Hist. Nat. Neur. Perl.* 229, 30, pl. 20, f. 5.

Vera Cruz.

51. PERLA BIFASCIATA.

Alæ fasciis duabus conspicuis.

Perla bifasciata *(Klug. MSS.) Pictet, Hist. Nat. Neur. Perl.* 230, 31, pl. 20, f. 6, 7.

Columbia.

Div. 2.

Prothorax flavus, nigro marginatus.

52. PERLA GENICULATA.

Perla geniculata *(De Haan, MSS.) Pictet, Hist. Nat. Neur. Perl.* 232, 32, pl. 21, f. 1, 2.

Japan.

53. Perla angulata.

Testacea; caput antice rotundatum marginatum, thorace latius, disco fulvo; prothorax valde rugulosus, antice rotundatus, lateribus subangulatis; alæ subtestaceæ.

Testaceous: head rounded and with a rim in front, broader than the thorax; disk tawny: antennæ testaceous: prothorax very rugose, obtusely angular on each side, rounded in front: wings with an indistinct testaceous tinge; veins testaceous; external basilar areolet with ten transverse veins; terminal areolet with three transverse veins; terminal part of the submarginal areolet with no transverse veins; submedian areolet with six transverse veins. Length of the body 6 lines; of the wings 20 lines.

a. Ceylon. Presented by William Templeton, Esq.

54. Perla signata.

Testacea, nitens; caput thorace non latius; antennæ nigræ; scutum antice multo latius; pedes femoribus et tibiis apice tarsisque nigris; alæ albidæ, fasciis duabus cinereis.

Testaceous, shining: head almost smooth, not broader than the thorax: eyes and antennæ black: ocelli bright red: scutum minutely rugulose, with a very slight longitudinal furrow, much broader in front; sides almost straight; angles rounded: tips of the femora, knees, tips of the tibiæ and tarsi black: wings whitish, with two gray bands which are occasionally indistinct, one in the middle, the other at the tip; veins yellow, blackish on the bands; external basilar areolet with fifteen transverse veins; terminal areolet with three transverse veins; submedian areolet with three or four transverse veins. Length of the body 4 lines; of the wings 12 lines.

a—c. Venezuela. From Mr. Dyson's collection.

Sub-group 4.

Species above or below the middle size: prothorax rugose, with straight sides which are often inflected when dry; its colour bright in the middle, black or brown on each side: wings livid or yellowish; veins of the same colour.

Div. 1.

Species magnæ. Alæ fuscæ, vix hyalinæ, ad costam flavæ.

55. PERLA GAYI.

Perla Gayi, *Pictet, Hist. Nat. Neur. Perl.* 238, 33, pl. 10, f. 3.
Chili.

Div. 2.

Species mediocres vel parvæ. Alæ fusco-hyalinæ; costa vix propriæ coloris.

Sub-div. 1.

Species mediocres. Prothoracis color discalis maculam irregularem fingens.

56. PERLA NIGRO-CINCTA.

Prothorax flavus et niger; setæ caudales longitudine mediocres.

Perla nigro-cincta, *Pictet, Hist. Nat. Neur. Perl.* 236, 34, pl. 22, f. 5—8.

Mexico.

57. PERLA LONGICAUDA.

Prothorax lividus et fuscus; setæ caudales longæ.

Perla longicauda, *Pictet, Hist. Nat. Neur. Perl.* 238, 35, pl. 23, f. 1—4.

Brazil.

Sub-div. 2.

Species parvæ. Prothoracis color discalis vittam dorsalem fingens.

58. PERLA DILATICOLLIS.

Alæ læte fuscæ.

Perla dilaticollis, *Burm. Handb. Ent.* ii. 880, 7. *Pictet, Hist. Nat. Neur. Perl.* 240, 36, pl. 23, f. 5—10.
Isogenus Clio? *Newm. Mag. Nat. Hist.* iii. 86.

Brazil, Columbia, Mexico, Canada?

59. Perla litura.

Alæ nigræ.

Perla litura, *Pictet, Hist. Nat. Neur. Perl.* 242, 37, pl. 24, f. 1—3.

Mexico.

Sub-group 5.

Species mediocres vel parvæ, flavæ vel fuscæ, fere unicolores. Prothorax rugosus, lateribus rectis vel sinuatis. Alæ plus minusve limpidæ, venis corporis colore.

Species of middle or small size: prothorax rugose, with straight or sinuated sides; general colour yellow or brown, almost uniform: wings more or less colourless; veins of the ground colour.

Div. 1.

Color corporis et alarum pallide flavus.

60. Perla Xanthenes.

Lutea; ocelli 3 nigro cincti; antennæ flavæ; prothorax quadratus, postice valde angustior.

Perla Xanthenes, *Newm. Ent. Mag.* v. 178; *Mag. Nat. Hist. new series*, iii. 35, 3. *Pictet, Hist. Nat. Neur. Perl.* 245, 38, pl. 21, f. 3, 4.

a, *b*. Georgia. From Mr. Abbot's collection.

61. Perla hyalina.

Ocelli postici nigro cincti; antennæ fuscæ.

Perla hyalina (*Kollar, MSS.*), *Pictet, Hist. Nat. Neur. Perl.* 247, 39, pl. 21, f. 5—8.

Brazil.

Div. 2.

Color corporis et alarum fuscus vel lividus.

Sub-div. 1.

Antennæ bicolores.

62. PERLA ÆGYPTIACA.

Antennæ basi fuscæ, apice flavæ.

Perla Ægyptiaca (*Kollar, MSS.*), *Pictet, Hist. Nat. Neur. Perl.* 251, 41, pl. 25, f. 6—8.

Egypt.

63. PERLA ANNULARIS.

Antennæ flavæ, apice nigræ; articulus 1us fuscus.

Perla annularis, *Pictet, Hist. Nat. Neur. Perl.* 252, 42, pl. 25, f. 3—5.

Brazil?

Sub-div. 2.

Antennæ fuscescentes, fere unicolores.

64. PERLA ANNULICAUDA.

Mediocris; prothorax capite latior.

Perla annulicauda, *Pictet, Hist. Nat. Neur. Perl.* 249, 40, pl. 22, f. 1—4.

Mexico, Brazil.

65. PERLA OCCIPITALIS.

Parva; caput rufescente-fulvum, macula occipitali nigra; prothorax fuscus, capite angustior; venæ valde distinctæ.

Perla occipitalis, *Pictet, Hist. Nat. Neur. Perl.* 254, 43, pl. 26, f. 1—3.

United States.

66. Perla debilis.

Parva; prothorax capite angustior; venæ pallidissimæ vix distinctæ.

Perla debilis, *Pictet, Hist. Nat. Neur. Perl.* 255, 44, pl. 26, f. 4.

Brazil.

67. Perla luteola.

Fulva; caput et prothorax angusta, colore similia.

Perla luteola, *Burm. Handb. Ent.* ii. 881, 13. *Pictet, Hist. Nat. Neur. Perl.* 257, 45, pl. 26, f. 5—7.

Java.

68. Perla Duvaucelii.

Fusca; caput et prothorax lata, colore similia.

Perla Duvaucelii, *Pictet, Hist. Nat. Neur. Perl.* 258, 46, pl. 27, f. 1, 2.

East Indies.

Sub-group 6.

Species parvæ, maculis rufescentibus et nigris.

Species of small size: body with reddish and black spots.

69. Perla picta.

Perla picta, *Pictet, Hist. Nat. Neur. Perl.* 261, 47, pl. 27, f. 3—8.

a—c. New York. Presented by the Entomological Club.

Sub-group 7.

Species parvæ. Caput et prothorax nigra. Alæ nigro-fuscæ.

Species of small size: head and prothorax black: wings very deep brown.

Div. 1.

Caput mediocre, prothorace infixum.

Subdiv. 1.

Vena costalis flava.

70. PERLA COSTALIS.

Perla costalis, *Pictet, Hist. Nat. Neur. Perl.* 264, 48, pl. 24, f. 4.
Vera Cruz.

Subdiv. 2.

Venæ omnino nigræ.

Sect. 1.

Mesothorax et metathorax flavi.

71. PERLA CALIGATA.

Perla caligata, *Burm. Handb. Ent.* ii. 880, 8. *Pictet, Hist. Nat. Neur. Perl.* 266, 49, pl. 24, f. 5, 6.
a. Java. From Mr. Argent's collection.

Sect. 2.

Mesothorax et metathorax nigri.

* Pedes nigri, basi læte flavi.

72. PERLA KLUGII.

Perla Klugii, *Pictet, Hist. Nat. Neur. Perl.* 267, 50, pl. 25, f. 1, 2.
Brazil.

** Pedes nigri, vel fusco varii, sed non distincte bicolores.

† Abdomen et pedes nigri, fusco varii.

73. PERLA OBSCURA.

Antennæ fuscæ, unicolores, vix crenulatæ; alarum venæ copiosissimæ.

Perla obscura, *Pictet, Hist. Nat. Neur. Perl.* 269, 51, pl. 28, f. 1—4.

Brazil.

74. PERLA POLITA.

Antennæ crenulatæ, subannulatæ; alarum venæ sat copiosæ.

Perla polita, *Burm. Handb. Ent.* ii. 879, 6. *Pictet, Hist. Nat. Neur. Perl.* 271, 52, pl. 28, f. 5—9.

Brazil.

†† Color omnino niger.

75. PERLA MORIO.

Perla Morio, *Pictet, Hist. Nat. Neur. Perl.* 272, 53, pl. 30, f. 1—5.

Columbia.

Div. 2.

Caput magnum, liberum, omnino nigrum. Abdomen fulvum.

76. PERLA FLAVIVENTRIS.

Perla flaviventris *(Hoffmansegg, MSS.) Pictet, Hist. Nat. Neur. Perl.* 274, 53, pl. 29.

Portugal.

Sub-genus 5. CHLOROPERLA.

Alarum areola marginalis terminalis vena una aut nulla transversa. Regio submarginalis venis transversis nullis apud apicem. Venæ subcostalis venula accessoria simplex aut bifurca, singula vel duplici.

Chloroperla p., *Newman, Ent. Mag.* v. 500. *Steph. Ill. Brit. Ent. Mand.* vi. 137. *Pictet, Hist. Nat. Neur.* 145, 5.

Terminal part of the submarginal region without cross veins; accessory vein of the subcostal vein simple or bifurcate; marginal terminal areolet with at most one cross vein beyond that which terminates the accessory vein at the costal vein. Species generally small; European species more or less yellowish green; some exotic species brown or blackish.

Div. 1.

Alæ unicolores.

Subdiv. 1.

Corpus plerumque nigrum.

Sect. 1.

Caput et prothorax vitta dorsali flava.

77. Perla Guerinii.

Perla Guerinii, *Pictet, Hist. Nat. Neur. Perl.* 279, 55, pl. 30, f. 6—8.

New Orleans.

Sect. 2.

Caput nigrum, flavo marginatum. Prothorax vitta media nigra.

78. Perla maculata.

Perla maculata, *Pictet, Hist. Nat. Neur. Perl.* 280, 56, pl. 30, f. 9.

Philadelphia.

Subdiv. 2.

Corpus plerumque flavum vel viridescens.

Sect. 1.

Capitis macula nebulosa.

Subsect 1.

Occipitis discus fuscus, unicolor.

79. PERLA RIVULORUM.

Perla rivulorum, *Pictet, Hist. Nat. Neur. Perl.* 284, 58, pl. 32.
Switzerland.

Subsect. 2.

Occipitis discus flavo maculatus.

Group 1.

Corpus robustum. Prothorax capitis latitudine.

80. PERLA AFFINIS.

Perla affinis, *Pictet, Hist. Nat. Neur. Perl.* 286, 59, pl. 31, f. 5—7.
Portugal.

Group 2.

Corpus gracile, tenue. Prothorax capite angustior.

81. PERLA VENOSA.

Areola costalis viridis.

Chloroperla venosa, *Steph. Ill. Brit. Ent. Mand.* vi. 139, 4. *Pictet, Hist. Nat. Neur. Perl.* 297, 62, pl. 35, f. 1—3.
Perla virescens, var. ?

82. Perla griseipennis.

Areola costalis hyalina, cinerea.

Perla griseipennis, *Pictet, Hist. Nat. Neur. Perl.* 299, 63, pl. 35, f. 4—7.

Switzerland.

Subsect. 2.

Capitis macula isolata, ferri-equini figura.

Group 1.

Color plerumquè fulvus aut viridis. Setæ caudales non aut vix annulatæ.

83. Perla virescens.

Perla virescens, *Pict. Ann. Sci. Nat.* xxxiii. 60, pl. 6, f. 8—10; *Hist. Nat. Neur. Perl.* 288, 60, pl. 33, 34, f. 1. *Burm. Handb. Ent.* ii. 878, 2.

Phrygranea grammatica? *Scopoli, Ent. Carn.* 269, 703. *Poda, Musæum Græcum*, 99. *De Vill. Linn. Ent.* iii. 26, 4. *Schrank, Faun. Boic.* 1897; *Ins. Austr.* 608.

Perla virens? *Zett. Ins. Lapp.* 1059.

Chloroperla grammatica, *Newm. Mag. Nat. Hist. new series*, iii. 87, 2.

Chloroperla fuscipennis, var., *Curt. Steph. Ill. Brit. Ent. Mand.* vi. 138, 1.

Chloroperla lateralis, var., *Steph. Ill. Brit. Ent. Mand.* vi. 138, 2.

Chloroperla media, var., *Curt. Steph. Ill. Brit. Ent. Mand.* vi. 138, 3.

a—e. England.

f—l. Dartmoor. From Dr. Leach's collection.

m—p. ———? From Mr. Children's collection.

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Group 2.

Color plerumquè rufescens. Setæ caudales distincte annulatæ.

84. Perla rufescens.

Chloroperla rufescens, *Steph. Ill. Brit. Ent. Mand.* vi. 139, 5. *Pictet, Hist. Nat. Neur. Perl.* 295, 61, pl. 34, f. 7.
Perla virescens, var.?

a. England.

Div. 2.

Alæ tricolores.

85. Perla fenestrata.

Perla fenestrata, *Pictet, Hist. Nat. Neur. Perl.* 281, 57, pl. 31, f. 1—4.

Columbia.

86. Perla Spio.

Testacea fere unicolor; ocelli duo fuseo-nigri; oculi magni, nigri; caput prothorace latius; pedes incrassati; alæ subobscuræ iridescentes.

Chloroperla Spio, *Newm. Mag. Nat. Hist. new series*, iii. 186, 1.
Perla Spio, *Pictet. Hist. Nat. Neur. Perl.* 282.

a. Sierra Leone. Presented by the Rev. D. F. Morgan.

87. Perla Clymene.

Caput flavum; oculis ocellisque nigris; alæ fusco leviter tinctæ, venis omnibus fuscis.

Chloroperla Clymene, *Newm. Mag. Nat. Hist. new series*, iii. 87, 4. *Pictet, Hist. Nat. Neur. Perl.* 283.

a. Georgia. From Mr. Abbot's collection.

88. Perla Cydippe.

Pallide lutea ; antennæ fuscæ, basi imo tantum luteæ ; alæ venuste virescentes, venis concoloribus.

Chloroperla Cydippe, *Newm. Mag. Nat. Hist. new series*, iii. 88, 8.
Perla Cydippe, *Pictet, Hist. Nat. Neur. Perl.* 317.

a, b. Georgia. From Mr. Abbot's collection.

89. Perla Transmarina.

Pallide fusca; prothorax fuscus, linea mediana longitudinali flavida ; caput flavidum ; oculis maculisque duobus fuscis ; alæ anticæ hyalinæ, basi flavidæ venis fuscis ; alarum posticarum venæ apice tantum fuscæ.

Chloroperla transmarina, *Newm. Mag. Nat. Hist. new series*, iii. 87, 3 ; *Ent. Mag.* v. 499.
Perla transmarina, *Pictet, Hist. Nat. Neur. Perl.* 283.

a. United States.

90. Perla? Cyrene.

Atra ; caput vix depressum ; antennæ 40-articulatæ, validæ, submoniliformes, corpore vix breviores, articulis subbvatis ; prothorax subtransversus, acutangulus, fere quadratus, capite paullo latius ; setæ caudales brevissimæ, incurvæ, 14-articulatæ ; tibiæ flavo cinctæ; alæ nigricantes, semiopacæ. Long. alar. 12 lin.

Chloroperla Cyrene, *Newm. Zool.* iii. 853, 3.

New Zealand.

91. Perla Ephyre.

Caput flavum, macula verticali fusca ; oculi nigri ; setæ caudales virescentes fusco annulatæ.

Chloroperla Ephyre, *Newm. Mag. Nat. Hist. new series*, iii. 87, 5.
Perla Ephyre, *Pictet, Hist. Nat. Neur. Perl.* 283.

a. Georgia. From Mr. Abbot's collection.

92. Perla Opis.

Nigra, nitida, concolor; prothoracis latera convexa; alæ obscure fusco tinctæ, venis saturatioribus.

Chloroperla Opis, *Newm. Mag. Nat. Hist. new series*, iii. 89, 11.

93. Perla viridella.

Perla viridella, *Ramb. Hist. Nat. Ins. Neur.* 456, 14.

Chamounix.

94. Perla chlorella.

Perla chlorella, *Ramb. Hist. Nat. Ins. Neur.* 457, 15.

Europe as far as South Spain.

95. Perla tenella.

Perla tenella, *Ramb. Hist. Nat. Ins. Neur.* 457, 16.

France.

Div. 3.

Antennæ setæque caudales elongatæ. Pedes elongati. Alarum anticarum venæ apicales parallelæ 6, venulis transversis numerosis intersectæ.

Leptoperla, *Newm. Mag. Nat. Hist. new series*, iii. 89.

96. Perla Beroe.

Fusca; pedes anteriores fusci, tibiis medio testaceis; femora postica testacea, apice fusca; alæ opacæ fuscæ, versus apicem maculis albidis notatæ.

Leptoperla Beroe, *Newm. Mag. Nat. Hist. new series*, iii. 89, 1.

Van Dieman's Land.

97. Perla citrinella.

Lutea; caput thorace non latius; antennæ fuscæ, basi pallidæ; scutum antice et apud sulcum nigricans; alæ limpidæ.

Perla citrinella, *Barnston, MSS. Newport, Proc. Linn. Soc. Lond.* (1848), i. 388, 6.

Pale luteous, shining: head not broader than the thorax: eyes and ocelli black: antennæ brown, pale towards the base: scutum minutely rugulose, blackish on the fore border and along the longitudinal furrow, rounded on each side, not angular nor broader in front: wings quite colourless; veins pale yellow; external basilar areolet with four transverse veins; terminal areolet with one or two transverse veins; submedian areolet with four transverse veins. Length of the body 3 lines; of the wings 10 lines.

a, b. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

c. Nova Scotia. From Lieut. Redman's collection.

98. PERLA DECOLORATA.

Pallide testacea; caput thorace paullo latius, macula angulari nigricante; scutum fusco bimaculatum; alæ hyalinæ.

Pale testaceous: head a little broader than the thorax, with a blackish irregular mark extending forwards from the ocelli, truncate in front: eyes and ocelli black: antennæ very minutely pubescent: scutum minutely rugulose, with a longitudinal furrow, not broader in front, a large oblong brown spot on each side; sides almost straight; angles rather sharp: wings hyaline; veins black, testaceous towards the base. Length of the body 4 lines; of the wings 12 lines.

a, b. Great Bear Lake, N. America. Presented by Sir John Richardson.

99. PERLA DECISA.

Ferruginea, nitens, subtus testacea; antennæ fuscæ; scutum subquadratum, angulis sat acutis; alæ anticæ subcinereæ.

Ferruginous, shining, testaceous beneath: head testaceous in front, a little broader than the thorax: antennæ brown, minutely pubescent: scutum minutely rugulose, subquadrate; angles rather sharp: wings slightly gray; veins black; external basilar areolet with four transverse veins; terminal areolet with three transverse veins; submedian areolet with five transverse veins. Length of the body 3½ lines; of the wings 11 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

100. Perla opposita.

Nigra, nitens, ferrugineo varia; caput antice testaceum, thorace vix latius; prothorax antice non latius, disco ruguloso, lateribus marginatis rectis, angulis sat acutis; scutellum flavo maculatum; alæ subcinereæ, ad venas transversas obscuriores.

Black, shining, partly ferruginous: head testaceous in front, hardly broader than the thorax: antennæ very minutely pubescent: prothorax minutely punctured, rugulose on the disk, not broader in front, with a rim on each side and along the fore border; sides straight; angles rather sharp: scutellum with a yellow spot in front: wings very slightly gray, darker about the transverse veins; veins black. Length of the body 4½ lines; of the wings 13 lines.

a, *b*. Van Dieman's Land. From Dr. Hooker's collection.
c. Van Dieman's Land. From Mr. Smith's collection.
d. New Zealand. Presented by Capt. J. C. Ross.

Sub-genus 6. ISOPTERYX.

Alarum posticarum regio analis vix ulla.

Anal region of the hind-wings almost wanting.

Isopteryx, *Pictet*, *Hist. Nat. Neur. Perl.* 146, 6.

Species yellow, of small size.

Div. 1.

Antennæ serratæ. Prothorax maculis duabus magnis fuscis.

101. Perla serricornis.

Perla serricornis, *Pictet*, *Hist. Nat. Neur. Perl.* 303, 64, pl. 36, f. 1—3.

Germany.

Div. 2.

Antennæ setaceæ. Prothorax unicolor, aut striis nigris notatus.

Sect. 1.

Antennæ plerumquè flavæ.

102. PERLA MONTANA.

Perla montana, *Pictet, Hist. Nat. Neur. Perl.* 305, 65, pl. 36, f. 4—6.

Bex. Alps of Piedmont.

Sect. 2.

Antennæ nigræ, triente basali flavæ.

Subsect. 1.

Setæ caudales apice nigræ.

Group 1.

Corpus viridescente-flavum. Macula nulla nigra inter ocellos. Prothorax vitta nulla dorsali nigra.

103. PERLA TORRENTIUM.

Perla torrentium, *Pictet, Hist. Nat. Neur. Perl.* 307, 66, pl. 37, f. 1—4.

Jena. Bohemia.

Group 2.

Corpus plerumquè læte fulvum. Macula parva nigra inter ocellos. Prothorax vitta gracili nigra.

104. Perla taurica.

Areola costalis viridis; venæ fuscæ.

Perla taurica, *Pictet, Hist. Nat. Neur. Perl.* 309, 67. pl. 37, f. 5, 6.

Taurus.

105. Perla Burmeisteri.

Areola costalis limpida; venæ pallidæ.

Perla Burmeisteri, *Pictet, Hist. Nat. Neur. Perl.* 311, 68, pl. 37, f. 7, 8.

North Germany.

Subsect. 2.

Setæ caudales omnino flavæ.

Group 1.

Prothorax mediocris, nigro marginatus.

106. Perla flava.

Perla flava, *Geoffr. Ins.* ii. 232, 4. *Fourcr. Ent. Par.* 349, 4. *Pictet, Hist. Nat. Neur. Perl.* 313, 69, pl. 38, f. 1, 2.

Perla viridis, *Fabr. Ent. Syst.* ii. 74, 11. *Zett. Ins. Lapp.* 1059, 6.

Perla tripunctata, *Scop. Ent. Carn.* 267, 704. *De Vill. Linn. Ent.* iii. 26, 5.

Semblis tripunctata, *Schrank, Ins. Austr.* 607. *Faun. Boic.* 1898.

Phryganea viridis, *Turt. Syst. Nat.* iii. 395.

Perla lutea, *Latr. Hist. Nat. Ins.* xiii. 491. *Oliv. Enc. Méth.* x. 69, 3.

Chloroperla flava, *Newm. Mag. Nat. Hist. new series*, iii. 88, 6. *Steph. Ill. Brit. Ent. Mand.* vi. 139, 6.

Dodecatoma flava, *Léon Dufour.*

a—c. England.

d—f. Dartmoor. From Dr. Leach's collection.

g—i. ——— ? From Mr. Children's collection.

Group 2.

Prothorax minimus, omnino flavus.

Chloroperla, *Newm. Ent. Mag.* v. 500. Sexuum amborum alæ pariter repandæ, pariterque abdomen tegentes. Telum setis duabus instructum. Proalæ vena subcostali cum costali parallelo.

107. PERLA APICALIS.

Luteo-viridis; oculis antennarum apicibusque nigerrimis.

Chloroperla apicalis, *Newm. Ent. Mag.* i. 286. *Mag. Nat. Hist. new series*, iii. 88, 7.
Perla pallida, *Steph. Ill. Brit. Ent. Mand.* vi. 139, 7.
Perla apicalis, *Pictet, Hist. Nat. Neur. Perl.* 316, 70, pl. 38, f. 3—9.

a, *b*. England.

Genus 5. CAPNIA.

Palpi filiformes. Abdomen setis longis.

Capnia, *Pictet, Hist. Nat. Neur. Perl.* 318.
Perla p., *Zett.*; *Pictet* (olim).
Chloroperla p., *Newman.*
Semblis p., *Burm.*
Leptomeres ? *Rambur.*

Palpi filiform: abdomen with long bristles.

Sub-genus 1. CAPNIA.

Alarum apices venis transversis nullis.

Capnia, *Pictet, Hist. Nat. Neur. Perl.* 319.

Tips of the wings without transverse veins.

1. CAPNIA NIGRA.

Abdomen disco flavum; maris alæ longæ; venæ rectæ, regulares.

Capnia nigra, *Pictet, Hist. Nat. Neur. Perl.* 321, 1, pl. 39.
Perla nigra, *Pictet, Ann. Sci. Nat.* xxviii. 61, pl. 6, f. 11—13.
Chloroperla nigra, *Newm. Mag. Nat. Hist. new series*, iii. 88, 10.

2. Capnia pygmæa.

Abdomen omnino nigrum; maris alæ breves; venæ rectæ, regulares.

Semblis pygmæa, *Burm. Handb. Ent.* ii. 874, 1.
Capnia pygmæa, *Pictet, Hist. Nat. Neur. Perl.* 324, 2, pl. 40, f. 1—3.

Pennsylvania, Newfoundland.

3. Capnia necydaloides.

Venæ ad partem indirectæ, irregulares.

Capnia necydaloïdes *(Kollar, MSS.) Pictet, Hist. Nat. Neur. Perl.* 326, 3, pl. 40, f. 4, 5.

North America.

Sub-genus 2. GRIPOPTERYX.

Alarum apices venis plurimis transversis reticulatæ.

Gripopteryx, *Pictet, Hist. Nat. Neur. Perl.* 319, 327.

Tips of the wings reticulated with numerous transverse veins: abdomen of the female terminated by claviform appendages.

4. Capnia cancellata.

Nigro-fusca; alæ posticæ reticulatæ.

Capnia cancellata, *Pictet, Hist. Nat. Neur. Perl.* 328, 4, pl. 41.

Brazil.

5. Capnia gracilis.

Cinerea; alæ posticæ non reticulatæ.

Semblis gracilis, *Burm. Handb. Ent.* ii. 876, 8.
Capnia gracilis, *Pictet, Hist. Nat. Neur. Perl.* 330, 5, pl. 42, f. 1—3.

Brazil.

6. Capnia ? bifrons.

Fusco-nigra, nitida ; alæ fusco tinctæ.

Chloroperla bifrons, *Newm. Ent. Mag.* v. 401. *Mag. Nat. Hist. new series*, iii. 89, 9.

Scotland.

7. Capnia pygmæa (Nomen bis lectum).

Nigra, subnitida, immaculata ; alæ cinereæ, venis apicalibus omnibus simplicibus, plaga discali solita venis tribus tantum ornata.

Perla pygmæa, *Zett. Ins. Lapp.* 1059, 4.

Lapland.

8. Capnia vernalis.

Perla vernalis, *Barnston, MSS.*
Capnia vernalis, *Newport, Proc. Linn. Soc.* (1838), 388, 3.

9. Capnia ? rufeola.

Leptomeres rufeola, *Ramb. Nat. Hist. Ins. Neur.* 457, 1.

France.

10. Capnia ? flaveola.

Leptomeres flaveola, *Ramb. Hist. Nat. Ins. Neur.* 458, 2.

France.

11. Capnia ? pallidella.

Leptomeres pallidella, *Ramb. Hist. Nat. Ins. Neur.* 458, 3.

France.

12. Capnia ? albella.

Leptomeres albella, *Ramb. Hist. Nat. Ins. Neur.* 458, 4.

France.

Genus 6. NEMOURA.

Palpi filiformes. Abdomen setis nullis.

Nemoura, *Latr.*
Phryganea p., *Linn.*
Perla p., *Geoffr.*
Semblis p., *Burm.*
Nemoura et Leuctra, *Steph.*

Sub-genus 1. TŒNIOPTERYX.

Palpi labiales mediocres, remoti. Abdomen setis tribus triarticulatis brevissimis terminatum. Tarsorum articuli longi, subæquales. Alæ plerumque involutæ, cinereo et albido sæpe fasciatæ. Parastigmatis venæ X non fingentes.

Tœniopteryx, *Pictet, Hist. Nat. Neur. Perl.* 343, pl. 42, f. 4.

Veins of the parastigma not forming an X: labial palpi middle-sized, far apart: abdomen terminated by very short rudimentary three-jointed tail-bristles: joints of the tarsi long, almost equal: wings generally involved into a half-cylinder, often with gray and whitish bands.

Div. 1.

Alæ fasciis cinereis plus minusve distinctis.

Subdiv. 1.

Alæ fasciis tribus valde distinctis, maris rudimentales.

1. NEMOURA TRIFASCIATA.

——— ——— fig., *Schæff. Icon.* pl. 37, f. 2, 3. *Abhandl. Ins. Mem.* 7.

Nemoura trifasciata, *Pictet, Ann. Sci. Nat.* xxvi. 379, 3, pl. 15, f. 4—10; *Mém. Soc. Phys. Genève*, vii. 178; *Hist. Nat. Neur. Perl.* 351, 2, pl. 44, 45, f. 1—5. *Zett. Ins. Lapp.* 1057.

Brachyptera trifasciata, *Newport.*

a, *b*. England.
c. Dartmoor. From Dr. Leach's collection.

Subdiv. 2.

Alæ fasciis indistinctis vel minusquam tribus, maris nonnunquam brevissimæ at non rudimentales.

Sect. 1.

Femora fusca. Alæ subopacæ, maris breves; venæ mediocres.

2. NEMOURA NEBULOSA.

Phryganea nebulosa, *Linn. Syst. Nat. ed.* 12, 908, 2; *Faun. Suec.* 1499. *Gmel. ed. Syst. Nat.* i. 2631, 2. *De Vill. Linn. Ent.* iii. 25, 2. *Deg. Ins.* ii. 2, 730, pl. 23, f. 16, 17; vii. pl. 44, f. 17, 18. *Berk. Syn.* i. 150. *Stew. El. Nat. Hist.* ii. 213. *Turt. Syst. Nat.* iii. 395.

Perla X-fusca, &c.? *Geoffr. Ins.* ii. 232, 3.

Perla nebulosa, *Fourc. Ent. Par.* 349, 3.

Semblis nebulosa, *Fabr. Ent. Syst.* ii. 74, 9. *Walck. Faun. Par.* ii. 11, 2. *Cederh. Faun. Ingr. Prod.* 136, 415. *Schrank, Ins. Austr.* 610; *Faun. Boic.* 1896. *Mus. Lesk.* i. 51, 22. *Müll. Prodr.* 144, 1655. *Burm. Handb. Ent.* ii. 875, 4.

Nemoura nebulosa, *Latr. Hist. Nat. Ins.* xiii. 50; *Gen. Crust. et Ins.* iii. 210, 1. *Oliv. Enc. Méth. Ins.* viii. 186, 1. *Zett. Ins. Lapp.* 1056, 1. *Pictet, Ann. Sci. Nat.* xxvi. 379, 3, pl. 15, f. 7, 8; *Mém. Soc. Phys. Genève*, vii. 178, 1; *Hist. Nat. Neur. Perl.* 347, 1, pl. 43. *Burm. Handb. Ent.* ii. 875, 4.

Nemoura variegata, *Steph. Ill. Brit. Ent. Mand.* vi. 144, 15, pl. 31, f. 2.

Nemura nebulosa, *Ramb. Hist. Nat. Ins. Neur.* 459, 1.

a. England.
b, c. ——— ? From Mr. Children's collection.
d. ——— ?

3. NEMOURA FUSCATA.

Semblis fuscata, *Fabr. Ent. Syst. Suppl.* 200, 10, 11.

Europe.

Sect. 2.

Femora flava, fusco vittata aut maculata. Alæ hyalinæ, maris longæ; venæ robustæ.

4. NEMOURA PRÆTEXTATA.

Femora basi ad apicem fusco vittata.

Semblis prætextata, *Burm. Handb. Ent.* ii. 875, 5.
Nemoura prætextata, *Pictet, Hist. Nat. Neur. Perl.* 355, 3, pl. 45, f. 7—9.
Europe.

5. NEMOURA FASCIATA.

Femora flava, apice fusca.

Semblis fasciata, *Burm. Handb. Ent.* ii. 875, 6.
Nemoura fasciata, *Pictet, Hist. Nat. Neur. Perl.* 359, 5, pl. 46, f. 4, 5.
Pennsylvania.

Div. 2.

Alæ fasciis nullis cinereis.

6. NEMOURA MONILICORNIS.

Fusca; antennæ annulis distinctis.

Nemoura monilicornis, *Pictet, Hist. Nat. Neur. Perl.* 357, 4, pl. 46, f. 1—3.
Switzerland, Banks of the Arve.

7. NEMOURA MAURA.

Nigra; antennæ annulis indistinctis.

Nemoura maura, *Pictet, Hist. Nat. Neur. Perl.* 361, 6, pl. 46, f. 6.
Var.? *a—c.* St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

Sub-genus 2. LEUCTRA.

Palpi labiales brevissimi. Setæ caudales nullæ. Tarsorum articuli 1us et 3us longi ; 2us brevissimus, subtus parum dilatatus. Alæ angustæ, plerumquè semicylindro involutæ. Parastigmatis venæ X non fingentes.

Leuctra, *Steph. Ill. Brit. Ent. Mand.* vi. 144; *Pictet, Hist. Nat. Neur. Perl.* 343, pl. 42, f. 5.

Veins of the parastigma not forming an X: labial palpi very short: no rudiments of tail-bristles: first and third joints of the tarsi long ; second very short, a little dilated beneath: wings narrow, long, generally rolled up into a half cylinder.

Div. 1.

Prothorax longus, antice et postice contractus. Abdomen supra pallide flavum.

8. Nemoura cylindrica.

——— cylindrica, *Deg. Ins.* vii. 599, pl. 44, f. 17, 19.
Nemoura cylindrica, *Oliv. Enc. Méth. Ins.* viii. 186, 4. *Pictet, Hist. Nat. Neur. Perl.* 366, 7, pl. 47, f. 1—5.

Europe.

9. Nemoura geniculata.

Nemoura geniculata, *Steph. Ill. Brit. Ent. Mand.* vi. 145, 1, pl. 31, f. 4. *Pictet, Hist. Nat. Neur. Perl.* 369.

a—d. England.

Div. 2.

Prothorax fere quadratus. Abdomen fuscum aut nigrum.

Subdiv. 1.

Prothorax lineis tribus longitudinalibus elevatis.

Sect. 1.

Antennæ omnino aut ad partem nigricantes.

Subsect. 1.

Antennæ omnino nigricantes.

Group 1.

Pedes fusci aut fulvi; femora apice nigra.

10. NEMOURA FUSCIVENTRIS.

Pedibus alisque fuscis.

Nemoura cylindrica, *Pictet, Ann. Sci. Nat.* xxvi. 385, pl. 15, f. 1—3. *Mém. Soc. Phys. Genève*, vii. 188. *Zett. Ins. Lapp.* 105, 5.
Leuctra fusciventris, *Steph. Ill. Brit. Ent. Mand.* vi. 145, 2.
Nemoura fusciventris, *Pictet, Hist. Nat. Neur. Perl.* 370, 8, pl. 48.
a—e. England.

11. NEMOURA ABDOMINALIS.

Leuctra abdominalis, *Steph. Ill. Brit. Ent. Mand.* vi. 145, 3.
Nemoura fusciventris, var.?
a, b. England.
c. Dartmoor. From Dr. Leach's collection.

12. NEMOURA NIGRA.

Minima ; pedes nigricantes ; alæ cinereæ.

Nemoura nigra, *Oliv. Enc. Méth.* viii. 186, 5. *Pictet, Ann. Sci. Nat.* xxvi. 384, 4 ; *Mém. Soc. Phys. Genève,* vii. 188 ; *Hist. Nat. Neur. Perl.* 373, 9, pl. 47. f. 6, 7. *Zett. Ins. Lapp.* 1055, 6.

Europe.

Group 2.

Pedes omnino fulvi.

13. NEMOURA TENUIS.

Nemoura tenuis, *Pictet, Hist. Nat. Neur. Perl.* 375, 10, pl. 49, f. 1—3.

Nemoura nivalis, *Fitch.*

a—d. New York. Presented by Dr. Asa Fitch.

e—h. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

i, j. York Factory. Presented by Dr. Rae.

Sub-sect. 2.

Antennæ basi fulvæ. Alæ valde iridescentes.

14. NEMOURA ANGUSTA.

Nemoura angusta, *Pictet, Hist. Nat. Neur. Perl.* 376, 11, pl. 49, f. 4—6.

Switzerland.

Section 2.

Antennæ omnino fulvæ.

15. NEMOURA FLAVICORNIS.

Nemoura flavicornis, *Pictet, Mém. Soc. Phys. Genève,* vii. 187, 16 ; *Hist. Nat. Neur. Perl.* 378, 12, pl. 49, f. 1—9.

Switzerland.

Sub-div. 2.

Prothorax punctis elevatis lineas distinctas non fingentibus.

16. NEMOURA BRUNNEA.

Nemoura brunnea, *Pictet, Hist. Nat. Neur. Perl.* 380, 13, pl. 49, f. 10—12.

Germany.

Div.?

17. NEMOURA FUSCA.

Leuctra fusca, *Curt.*

a, *b*. England.
c, *d*. Dartmoor. From Dr. Leach's collection.

18. NEMOURA FERRUGINEA.

Fusco-ferruginea, nitens ; caput thorace paullo latius ; scutum antice latius ; alæ subhyalinæ.

Brownish ferruginous, shining: head a little broader than the thorax: antennæ pale ferruginous, minutely pubescent: scutum minutely rugulose, with a slight longitudinal furrow, broader in front; sides slightly convex; angles somewhat rounded: wings subhyaline; veins brownish; external basilar areolet and terminal areolet with no transverse veins; submedian areolet with about eight transverse veins. Length of the body $1\frac{3}{4}$ line; of the wings 6 lines.

a—d. Nova Scotia. From Lieut. Redman's collection.

19. NEMOURA MINIMA.

Nigra, nitens ; caput thorace latius.

Perla minima, *Barnston, MSS. Newport, Proc. Linn. Soc. Lond.* (1848), i. 388, 2.

Black, smooth, shining, slender: head broader than the thorax: antennæ very minutely pubescent, shorter than the body: prothorax subquadrate, not broader in front; sides straight; angles sharp: wings hyaline; veins black; external basilar areolet with one transverse vein; terminal areolet with no transverse veins; internal basilar areolet and terminal areolet with no transverse veins; submarginal region divided by a single upright transverse vein;

submedian areolet with one transverse vein. Length of the body 1½—2½ lines; of the wings 2—3½ lines.

a—e. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

Sub-genus 3. NEMOURA.

Palpi labiales breves, approximati. Abdomen setis nullis apicalibus, maris nonnunquam ungulatum. Tarsi articulis 1o et 3o longis, 2o brevissimo. Alæ plerumquè expansæ. Parastigmatis venæ X fingentes.

Nemoura, *Pictet, Hist. Nat. Neur. Perl.* 343, pl. 42, f. 6.

Veins of the parastigma forming a very distinct X: labial palpi short, approximate: abdomen with no rudiments of tail-bristles; that of the male in some cases furnished with two ungulæ: first and third joints of the tarsi long; second very short: wings generally outspread.

Div. I.

Prothorax obscurus, granulatus, tuberculatus, lateribus rotundatis.

Sub-div. 1.

Antennæ articulo 1o flavo. Alæ læte fuscæ, fere unicolores.

20. NEMOURA VARIEGATA.

Nemoura variegata, *Oliv. Enc. Méth.* vii. 186, 3. *Pictet, Ann. Sci. Nat.* xxvi. pl. 14; *Mém. Soc. Phys. Genève*, vii. 179; *Hist. Nat. Neur. Perl.* 386, 14, pl. 50. *Zett. Ins. Lapp.* 1055, 3.
Nemoura macrophthalma, *Pictet, Mém. Soc. Phys. Genève*, vii. (mas).
Semblis pallipes, *Burm. Handb. Ent.* ii. 875, 3.
Nemura lunata? *Ramb. Hist. Nat. Ins. Neur.* 461, 4.
Nemoura nebulosa? *Steph. Ill. Brit. Ent. Mand.* vi. 140, 1.
Fusco-nigra; prothoracis lateribus rufo-piceis; pedibus pallide rufescentibus, femoribus posticis annulo obscuro; alis cinereis venis fuscis.

Europe.

21. Nemoura fuliginosa.

Fusco-nigra; capite postice, prothoracis lateribus, pedibusque fusco-rufescentibus; alis fuscescentibus, venis fuscis.

Nemoura fuliginosa, *Steph. Ill. Brit. Ent. Mand.* vi. 141, 2.
Nemoura nebulosa, var.?

a. England.
b. Germany.

Sub-div. 2.

Antennæ omnino nigricantes. Alæ albidæ, cinereo-nebulosæ.

22. Nemoura Meyeri.

Nemoura Meyeri, *Pictet, Hist. Nat. Neur. Perl.* 390, 15, pl. 51, f. 1—3.

Burgdorf.

Div. 2.

Prothorax lævis, nitens, punctis magnis projicientibus, lateribus subrectis.

Sub-div. 1.

Prothorax longitudine et latitudine æqualis.

Sect. 1.

Caput et antennæ nigra. Alarum venæ obscure fuscæ.

Sub-sect. 1.

Alæ hyalinæ, cinereæ vel læte fuscæ.

Group 1.

Femora postica macula lata nigra signata. Alæ cinereæ.

Sub-group 1.

Prothorax omnino niger. Alarum venæ cinereo obscuriore marginatæ.

23. NEMOURA NITIDA.

Nemoura nitida, *Pictet, Mém. Soc. Phys. Genève*, vii. 179, 5. *Hist. Nat. Neur. Perl.* 392, 16, pl. 51, f. 4—8.

Europe.

Sub-group 2.

Prothorax flavo marginatus. Alarum venæ cinereo non nebulosæ.

24. NEMOURA LATERALIS.

Nemoura lateralis, *Pictet, Mém. Soc. Phys. Genève*, vii. 180, 6; *Hist. Nat. Neur. Perl.* 395, 17, pl. 52, f. 1—3.

Swiss Alps.

Group 2.

Femora postica omnino fulva, aut striga gracili nigra tantum signata. Alæ læte fuscæ.

25. NEMOURA MARGINATA.

Nemoura marginata, *Pictet, Mém. Soc. Phys. Genève*, vii. 181, 7; *Hist. Nat. Neur. Perl.* 397, 18, pl. 52, f. 4—6.

Switzerland.

Sub-sect. 2.

Alæ opacæ, nigro-fuscæ, basi flavæ.

26. NEMOURA HUMERALIS.

Nemoura humeralis, *Pictet, Mém. Soc. Phys. Genève*, vii. 184, 11; *Hist. Nat. Neur. Perl.* 399, 19, pl. 52, f. 7—2.

Switzerland.

Section 2.

Statura minima. Caput et antennæ læte fusca. Alarum venæ fulvæ.

27. NEMOURA INCONSPICUA.

Nemoura inconspicua, *Pictet, Mém. Soc. Phys. Genève*, vii. 185, 12; *Hist. Nat. Neur. Perl.* 404, 21, pl. 53, f. 10—13.

Geneva.

Sub-div. 2.

Prothorax longitudine distincte latior.

28. NEMOURA CINEREA.

Nemoura cinerea, *Oliv. Enc. Méth.* viii. 186, 2. *Pictet, Ann. Sci. Nat.* xxvi. 372, 1; *Hist. Nat. Neur. Perl.* 401, 20, pl. 53, f. 1—10. *Zett. Ins. Lapp.* 1057, 4.

Semblis cinerea, *Burm. Handb. Ent.* ii. 876, 7.

a, *b*. Hammerfest, Finmark. Presented by F. Walker, Esq.

Div. ?

29. NEMOURA PALLIDA.

Pallide fusco-rufescens; oculis, meso- et meta-thoracis dorso, geniculis intermediis, abdomineque fusco-nigris; alis hyalinis, pallidis, venis fuscescentibus.

Nemoura pallida, *Steph. Ill. Brit. Ent. Mand.* vi. 141, 3.

England.

30. NEMOURA CRUCIATA.

Fusco-nigra; prothoracis lateribus piceo-rufescentibus; tibiis tarsisque intermediis piceo-nigris; alis fuscescentibus, cruce venisque saturatioribus.

Nemoura cruciata, *Steph. Ill. Brit. Ent. Mand.* vi. 141, 4.

a, *b*. England.

c, *d*. England, Dartmoor. From Dr. Leach's collection.

31. Nemoura affinis.

Fusco-nigra; prothoracis marginibus rufescentibus; pedibus anticis piceo-nigris, posterioribus pallide rufis; alis cinerascentibus cruce fusca, venis subfuscentibus,

Nemoura affinis, *Steph. Ill. Brit. Ent. Mand.* vi. 141, 5.

a. England.
b. ——— ? From Mr. Children's collection.

32. Nemoura pusilla.

Fusco-nigra; prothoracis lateribus pedibusque pallide rufescentibus; capite lato; antennis gracilibus; alis hyalinis pallidis, venis subfuscescentibus.

Nemoura pusilla, *Steph. Ill. Brit. Ent. Mand.* vi. 142, 6.

a. ——— ? From Mr. Children's collection.

33. Nemoura annulata.

Rufo-fusca, nigro variegata; pedibus pallide rufescentibus, femoribus posticis annulo obscuro fusco; alis fuseo-cinereis, venis fuscis.

Nemoura annulata, *Steph. Ill. Brit. Ent. Mand.* vi. 142, 7.

a. ——— ? From Mr. Children's collection.
b—d. England.

34. Nemoura pallipes.

Piceo-fusca, nitida; antennis subpilosis; pedibus pallidis; alis hyalinis subcinereis, venis pallidis.

Nemoura pallipes, *Steph. Ill. Brit. Ent. Mand.* vi. 142, 8.

England.

35. Nemoura luteicornis.

Nigro-picea, nitida; labro, capite postice, prothoracis lateribus, pedibusque rufescentibus; alis pallide cinereis, venis pallidis; antennis gracilibus pallide luteis.

Nemoura luteicornis, *Steph. Ill. Brit. Ent. Mand.* vi. 142, 9.

a. England.

36. Nemoura pallicornis.

Nigro-picea, nitida ; antennis elongatis pedibusque pallidis ; alis subfusco-cinereis, venis fuscis.

Nemoura pallicornis, *Steph. Ill. Brit. Ent. Mand.* vi. 143, 10.
England.

37. Nemoura nitida (Nomen bis lectum).

Piceo-fusca, nitida ; antennis gracilibus elongatis nigris ; pedibus pallido-rufis ; alis anjustis hyalinis, venis pallidis.

Nemoura nitida, *Steph. Ill. Brit. Ent. Mand.* vi. 143, 11.
a—*c*. England.
d. ——— ? From Mr. Children's collection.

38. Nemoura Cambrica.

Piceo-nigra ; prothorace rugoso ; mesothoracis lateribus pedibusque rufescentibus ; alis fuscescentibus, venis fuscis.

Nemoura Cambrica, *Steph. Ill. Brit. Ent. Mand.* vi. 143, 12.
England.

39. Nemoura sulcicollis.

Nigra, nitida ; prothorace rugoso, sulco dorsali ; pedibus piceis ; alis fuscescentibus, venis saturatioribus.

Nemoura sulcicollis, *Steph. Ill. Brit. Ent. Mand.* vi. 143, 13.
England.

40. Nemoura fumosa.

Atra, nitidissima ; abdomine tibiisque rufo-piceis ; alis fuscentibus, venis saturatioribus.

Nemoura fumosa, *Steph. Ill. Brit. Ent. Mand.* vi. 143, 14.
England.

41. Nemoura Genei.

Nemura Genei, *Ramb. Hist. Nat. Ins. Neur.* 461, 5.
Sardinia.

42. NEMOURA MINUTA.

Nemura minuta, *Ramb. Hist. Nat. Ins. Neur.* 460, 2.
France.

43. NEMOURA SOCIA.

Nemura socia, *Ramb. Hist. Nat. Ins. Neur.* 460, 3.
France.

44. NEMOURA PYGMÆA.

Nemura pygmæa, *Ramb. Hist. Nat. Ins. Neur.* 462, 6.

45. NEMOURA FONSCOLOMBII.

Nemura Fonscolombii, *Ramb. Hist. Nat. Ins. Neur.* 462, 7.
South France.

46. NEMOURA NIGRIPES.

Nemoura nigripes, *Zett. Ins. Lapp.* 1056, 2.
Group Tœniopteryx ?
Lapland.

47. NEMOURA NIVICOLA.

Perla nivicola, *Fitch, Wint. Ins. E. N. York, May*, 1847, 5, 3.
New York.

48. NEMOURA NIVALIS.

Nemoura nivalis, *Fitch, Wint. Ins. E. N. York, May*, 1847, 6, 4.
New York.

49. NEMOURA PUTATA.

Fusca, nitida; antennæ moniliformes, alis fere longiores, et cum pedibus concolores; alæ fusco tinctæ, brevissimæ, tibias posticas sedentis haud dimidio exporrigentes.

Nemoura putata, *Newm. Ent. Mag.* v. 401.
Scotland.

50. NEMOURA ALBIDIPENNIS.

Ferruginea, nitens; caput thorace multo latius; scutum antice vix latius, angulis sat acutis; alæ albidæ.

Ferruginous, shining: head much broader than the thorax: antennæ pubescent: scutum minutely rugulose, with an indistinct longitudinal furrow, hardly broader in front; sides almost straight; angles rather sharp: wings whitish; veins very pale testaceous; external basilar areolet with no transverse veins; terminal areolet with one transverse vein; submedian areolet with six or seven transverse veins. Length of the body 2 lines; of the wings 6 lines.

a. Nova Scotia. From Lieut. Redman's collection.

51. NEMOURA PERFECTA.

Nigra, nitens; caput thorace multo latius; scutum ferrugineum, rugulosum; pedes testacei, femoribus basi nigris; alæ hyalinæ, anticæ fusco-nebulosæ.

Black, shining: head smooth, much broader than the thorax: antennæ blackish, minutely pubescent: prothorax mostly ferruginous, minutely rugulose, much broader in front; sides almost straight; angles rather sharp: legs testaceous; femora, especially the hind pair, black towards the base and at the tips; tibiæ and tarsi blackish at the tips: wings hyaline; fore-wings clouded with brown near the tips and about the transverse veins in the disk; veins black. Length of the body 2½ lines; of the wings 5 lines.

a. Nova Scotia. From Lieut. Redman's collection

52. NEMOURA COMPLETA.

Nigra, gracilis, nitens; caput thorace multo latius, macula testacea; prothorax rugulosus; pedes ferruginei; alæ hyalinæ, anticæ fusco bifasciatæ.

Black, slender, shining: head much broader than the thorax, with a large testaceous spot between the eyes: antennæ minutely pubescent: prothorax minutely rugulose, with a slight longitudinal furrow, not broader in front; sides almost straight; angles rather sharp: legs ferruginous: wings hyaline; fore-wings with a distinct

brown band beyond the middle, and another at the tip; veins black. Length of the body 2 lines; of the wings 5½ lines.

a. Nova Scotia. From Lieut. Redman's collection,

53. NEMOURA GLACIALIS.

Piceo-nigra; antennæ crassæ, corpore multo longiores; pedes fusci, validi; alæ subhyalinæ.

Nemoura (Brachyptera) glacialis, *Newport, Proc. Linn. Soc. Lond.* (1838), i. 389, 4.

Nemoura glacialis, *Barnston, MSS.*

Pitchy black: antennæ very stout, minutely pubescent, much longer than the body: legs brown, very thick: wings subhyaline; veins black, testaceous towards the base. Length of the body 3 lines; of the wings 8 lines.

a—c. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

54. NEMOURA SPEUSTICA.

Nemoura speustica, *Newm. Zool. Append.* cxxxii.

55. NEMOURA? REGELATIONIS.

Phryganea regelationis, *Scop. Ent. Carn.* 269, 702. "Tota nigra, alis (planiusculis) fuscescentibus, incumbentibus, hyalinis. Inter caput et thoracem plica transversa pallida. Abdomen muticum, supra plicæ prædictæ concolor. Long. 4 lin."

56. NEMOURA? MARTIA.

Phryganea Martia, *Scop. Ent. Carn.* 268, 701. "Alæ incumbentes (planiusculæ), hyalinæ, immaculatæ, venulis fuscis. Corpus fuscum. Pedes testacei. Antennæ nigræ, alarum longitudine. Frons tuberculis tribus. Thorax linea depressa antica sub qua foveolæ nonnullæ. Palpi colore pedum. Abdomen muticum, subtus fusco testaceum. Long. 5 lin."

LIST

OF THE

SPECIMENS

OF

NEUROPTEROUS INSECTS

IN

THE COLLECTION

OF THE

BRITISH MUSEUM.

PART II.—(SIALIDÆ—NEMOPTERIDES).

PRINTED BY ORDER OF THE TRUSTEES.
LONDON, 1853.

LONDON:
PRINTED BY EDWARD NEWMAN,
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INTRODUCTION.

THE principal object of the present Catalogue has been to give a complete list of the specimens of Neuropterous Insects contained in the collection of the British Museum, indicating at the same time the peculiarities of each, as regards variation of character, locality, and the source from whence it has been derived. With this view, the different individuals of each species contained in the collection are indicated by the letters *a*, *b*, *c*, &c., following the name of the species and its synonymes, and the description, if it appeared to have been before undescribed.

This part of the Catalogue of Neuropterous Insects has been prepared and the new species described by Mr. FRANCIS WALKER, so well known for his attention to this order of Insects.

The continuation is in hand, and will follow as soon as it is completed.

JOHN EDWARD GRAY.

British Museum,
8th February, 1853.

CATALOGUE

OF

NEUROPTEROUS INSECTS.

Sub-order 3. PLANIPENNIA.

Mandibulæ corneæ, maxillarum mando membranacea lobiformis ciliata. Palpi maxillares 5-articulati, labiales bi- vel triarticulati. Tarsi 5-articulati. Alæ quatuor planæ.

Neuroptera, p., *Linn.*, *Brullé.*
Synistata, p., *Fabr.*
Planipennes, p., *Latr.*
Planipennia, *Burm.*
Orthoptera, p., *Brullé.*
Megaloptera, p., *MacLeay.*
Planipennes et Panorpates, *Pictet.*
Planipennes et Semblides, *Ramb.*
Subnecromorphotica, *Westw.*
Stegoptera, p., *Newman.*

Fam. 1. SIALIDÆ.

Os non rostratum. Ocelli conspicui, vel tarsi articulo 4o dilatato. Coxæ anticæ maris non cornutæ. Tarsorum articulus 5us præcedentibus non crassior.

Semblides, *Ramb. Hist. Nat. Ins. Neur.* 435.
Raphidiidæ et Sialidæ, *Leach ; Curt. ; Steph.*
Raphidini, *Latr.*
Planipennes, p., *Latr.*
Perlariæ, p., *Latr.*

Panorpidæ, p., *Westw.*
Sialidæ (Sialides; Corydalides) et Raphidiidæ, *Westw.*
Sialidæ et Rhaphidiodea, *Burm.*
Corydalina et Raphidiina, *Newm.*

Genus 1. SIALIS.

Ocelli nulli. Tarsorum articulus 4us cordatus.

Hemerobius, p., *Gmel.*
Semblis, p., *Fabr.*
Sialis, *Latr.*; *Leach*; *Pictet*; *Steph.*; *Newm.*
Semblis, *Latr.* (olim), *Ramb.*

1. Sialis lutarius.

Fuscus; vertice vittis duabus latioribus guttisque plurimis flavo-fulvis impressis; alis infumatis, venis nigris.

Hemerobius lutarius, *Linn. Syst. Nat.* ii. 913, 14; *Faun. Suec.* 1513. *Geoffr. Ins. Par.* ii. 255, 3. *Hoefn. Pict. Pl.* 12. *Roes. Ins. Aq.* ii. pl. 13. *Schæff. Elem. Pl.* 97. *Icon. Ins. Ratisb.* pl. 37, f. 9, 10. *Deg. Ins.* ii. 2, 74, 5, pl. 20, f. 14, 15; pl. 23, *f.* 1—15. *Gmel. Ed. Syst. Nat.* i. 5, 2638, 14. *Stew. El. Nat. Hist.* ii. 216. *Turt. Syst. Nat.* iii. 400. *Shaw, Gen. Zool.* vi. pl. 83, fig. inf.
Semblis lutarius, *Fabr. Sp. Ins.* i. 387, 8; *Mant. Ins.* i. 2440, 8; *Ent. Syst.* ii. 74, 10. *Ramb. Hist. Nat. Ins. Neur.* 447, 2.
Sialis niger, *Latr. Hist. Nat.* xiii. 44; *Gen. Crust. et Ins.* iii. 200. *Leach, Ed. Encycl.* ix. 139.
Sialis lutarius, *Steph. Ill. Brit. Ent. Mand.* vi. 133, 1. *Pictet, Ann. Sci. Nat.* v. 8, pl. 3, f. 1, 4.
Sialis lutaria, *Burm. Handb. Ent.* ii. 947, 2.
Var.? Sialis fuliginosa, *Burm. Handb. Ent.* ii. 947, 1. *Fusco-atra; vertice vittis duabus angustis punctisque minutis fulvo-fuscis impressis.*

a—i. England.
j. Germany.
k—n. ——— ? From Mr. Children's collection.

2. SIALIS INFUMATUS.

Niger; alæ vix hyalinæ, nigro punctatæ, basi præcipuè infuscatæ.

Sialis infumatus, *Newm. Ent. Mag.* v. 500.
Semblis americanus, *Ramb. Hist. Nat. Ins. Neur.* 447, 1.

a—c. United States. Presented by the Entomological Club.
d. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.
e. Arctic America. Presented by Sir John Richardson.
f. Nova Scotia. From Lieut. Redman's collection.
g. Georgia. From Mr. Abbot's collection.

3. SIALIS FERRUGINEUS.

Ferrugineus; capitis vertex nigricans, vittis maculisque flavis; antennæ nigræ; abdomen nigrum, apice ferrugineum; pedes picei, coxis femoribusque ferrugineis; alæ pallide fuscescente-cinereæ.

Ferruginous: vertex of the head blackish, with several more or less interrupted yellow stripes: some yellow spots between the antennæ and about the mouth: palpi piceous: antennæ black, very pubescent: abdomen black, with a ferruginous tip: legs piceous; coxæ and femora ferruginous: wings pale brownish gray; veins piceous. Length of the body 3¾ lines; of the wings 11½ lines.

a. Georgia. From Mr. Abbot's collection.

Genus 2. ITHONE.

Caput porrectum, fere rotundatum, corpore paullo angustius. Antennæ setaceæ, corpore paullo breviores, basi approximantes, multi-articulatæ; articulo basali magno, rotundato, cæteris valde minoribus, subæqualibus. Oculi mediocres, rotundati, Labrum obtusum, setosum, medio subemarginatum. Mandibulæ elongatæ, apice acutæ, paullo incurvæ, haud dentatæ; maxillarum lacinia obtusa, apice membranacea, intus pilosa; galea tenuis, lacinia vix brevior. Palpi maxillares 5-articulati, articulo 1o 2oque brevissimis, cæteris longioribus subæqualibus. Maxilla extus setis rigidis instructa. Labium membranaceum, rugosum quasi desiccatum; palpi labiales 3-articulati, articuli breves subæquales. Prothorax transversus, brevis, capite latior. Mesothorax fere quadratus.

Metathorax latitudine brevior. Abdomen breve, obesum, hirsutum. Alæ amplæ, longitudinaliter sinuatæ, quasi plicatiles, magnitudine subæquales. Tarsi 5-articulati.

Ithone, *Newm. Ent. Mag.* v. 180.

1. ITHONE FUSCA.

Fusca, setosa, subtus dilutior et paullo flavescens; alæ fuscescentes; venæ longitudinales setis tectæ, transversæ nisi supracostales nudæ.

Ithone fusca, *Newm. Ent. Mag.* v. 181.

a. New Holland. Presented by the Entomological Club.
b. New Holland. From Mr. Argent's collection.
c. New Holland. From the Rev. J. Wenham's collection.
d. Swan River. Presented by Sir John Richardson.

Genus 3. MEROPE.

Caput corpore valde angustius, pronum, antice elongatum. Os sub pectore inclinatum. Antennæ corporis dimidio vix breviores, multi-articulatæ, ante medium incrassatæ, apice tenues, ante oculos insertæ, basi fere attingentes; articuli hirsuti, longitudine subæquales. Oculi elongati, reniformes, ad verticem, quasi *Dipterorum* conniventes, et infra antennas approximantes. Instrumenta cibaria elongata et rostrum, quasi *Panorpæ* formantes. Labrum elongatum, apice acutissimum. Alæ haud plicatæ, reticulatæ, amplissimæ, quasi *Hemerobii*, apice rotundatæ, magnitudine subæquales. Tarsi 5-articulati. Abdomen obesum, apice acutum.

Merope, *Newm. Ent. Mag.* v. 180. *Westw. Trans. Ent. Soc. Lond.* iv. 194.

1. MEROPE TUBER.

Fuscescens; antennæ, caput et prothorax saturatiora; abdomen, pedes et alæ dilutiora; oculi nigri; alarum anticarum margo posterior prope basin tubere parvo instructa.

Merope tuber, *Newm. Ent. Mag.* v. 180.

a. Trenton Falls, New York. Presented by the Entomological Club.

Genus 4. DILAR.

Os vix prominens. Ocelli tres, remoti, postici maximi opaci. Palpi brevissimi. Antennæ maris sat longæ, molles; extus pectinatæ, fœm. denticulatæ. Prothorax brevis. Oviductus longus, gracillimus. Tarsi articulis quinque, 1us cæteris multo longior, 5us 2o paullo brevior.

Dilar, *Ramb. Hist. Nat. Ins. Neur.* 445.

Mouth hardly prominent: palpi extremely short: ocelli three, far apart, hind pair very large, opaque: antennæ of the male rather long, soft, pectinated on the outer side; teeth long, soft, far apart; antennæ of the female denticulate: prothorax short: tarsi 5-jointed; first joint much longer than the others; fifth a little shorter than the second; claws simple, very slender, with a prominent foot-cushion between them: anal tip of the female furnished with a long, very slender oviduct: veins of the wings rather numerous; cross-veinlets few, excepting on the costal space which is rather long.

1. Dilar Nevadensis.

Obscure rufus; caput testaceum; abdomen basi et apice flavum; antennæ fuscæ; pedes fusco-flavescentes; alæ fuscescentes, apud medium unimaculatæ.

Dilar Nevadensis, *Ramb. Faune de l'Andalousie*, ii. pl. 9, f. 4, 5. *Hist. Nat. Ins. Neur.* 445, pl. 10, f. 3, 4.

Sierra Nevada; Granada.

Genus 5. CHAULIODES.

Ocelli tres in fronte supra antennas. Mandibulæ parvæ vel mediocres. Antennæ pectinatæ. Tarsorum articulus 4us integer, minutus.

Chauliodes, *Latr.*; *Burm.*; *Ramb.*
Hemerobius, p., *Linn.*
Semblis, p., *Fabr.*

Group 1.

Antennæ pectinatæ.

1. Chauliodes pectinicornis.

Cinereus, testaceo variegatus; alæ pallide cinereæ, venis fuscis pallide annulatis.

Hemerobius pectinicornis, *Linn. Syst. Nat.* ii. 911, 1; *Amœn. Acad.* vi. 412. *Fabr. Sp. Ins.* i. 386, 1; *Mant. Ins.* i. 244, 1. *Gmel. ed. Syst. Nat.* i. 5, 2638, 1. *Deg. Ins.* iii. 562, 2, pl. 27, f. 3. *Drury, Ins.* i. pl. 46, f. 3. *Pal. Beauv. Ins. Afr. et Amer. Neur.* pl. 1, f. 2.

Chauliodes pectinicornis, *Latr. Gen. Crust. et Ins.* iii. 198. *Burm. Handb. Ent.* ii. 950, 3. *Ramb. Hist. Nat. Ins. Neur.* 444, 1.

a, *b*. United States. Presented by the Entomological Club.
c. Wilmington, Delaware. Presented by E. Doubleday, Esq.
d. Massachusetts. From Professor Sheppard's collection.
e. ——? From Mr. Children's collection.
f, *g*. ——?

2. Chauliodes rastricornis.

Piceus; prothorax multo longior quàm latior; pedes testacei, tarsis obscurioribus; alæ cinereæ.

Chauliodes rastricornis, *Ramb. Hist. Nat. Ins. Neur.* 444, 2.

Body pitchy: head broader in front with several blackish lobes on the hinder part which is ferruginous: mouth ferruginous: antennæ black, deeply pectinated; branches subclavate: metathorax with a yellowish spot: legs testaceous; tarsi pitchy, except at the base: wings gray; veins pale testaceous in the fore-wings, with brown bands, about which the wings are slightly clouded; marginal region with twenty-three transverse veins, which are shorter and more oblique towards the tip.

a. North America. Presented by the Entomological Club.

3. Chauliodes Sinensis:

Piceus; caput thorace latius, ad os testaceum; antennæ nigræ; prothorax testaceus; alæ subhyalinæ, anticæ e maculis magnis fuscis oblique fasciatæ, posticæ margine antico fasciisque duabus fuscis.

Male. Piceous: head broader than the prothorax, testaceous towards the mouth: mandibles with black tips: antennæ black, deeply pectinated; branches subclavate: prothorax testaceous: legs pubescent; knees testaceous: wings subhyaline; fore-wings with many rather large brown spots, most of which form irregular oblique bands; veins pale testaceous; marginal region with two dark brown subquadrate spots and with about twenty-seven transverse veins which are mostly clouded with brown, are parallel to each other, and towards the tip are more contiguous and more oblique: hind-wings brown along most of the fore border, and with two oblique brown bands, one in the disk darker and more complete than the other which is diffuse, irregular, and interrupted, and contains some subhyaline spots in front. Length of the body 8—9 lines; of the wings 28—32 lines.

a. North China. From Mr. Cuming's collection.
b. China. From Mr. Stevens' collection.

4. Chauliodes Californicus.

Piceus aut obscure ferrugineus; caput antice et postice testaceum; metathorax flavo maculatus; abdomen subtus rufescens; pedes nigricantes, coxis femoribusque subtus testaceis; alæ cinereæ, fusco guttatæ.

Body pitchy or dark ferruginous: head broader in front, as long as the prothorax, with several ridges of various length towards the hind border which is testaceous in the middle: mouth testaceous: prothorax slightly rugose longitudinally, much longer than broad: metathorax with a yellowish spot on the disk: abdomen reddish beneath: legs blackish; coxæ and femora testaceous beneath: wings gray; fore-wings adorned between all the veins with numerous brown dots of various size and shape, a few of them confluent; veins pitchy, here and there pale testaceous; transverse veins of the marginal region with the usual structure: hind-wings with very indistinct dots except along the fore border; veins piceous on the costal region, testaceous elsewhere. Length of the body 10 lines; of the wings 38 lines.

a. California. From M. Hartweg's collection.

5. Chauliodes simplex.

Piceus; caput antice latius, ore luteo; thorax subferrugineus; pedes testacei, tarsis piceis; alæ subcinereæ, anticæ fusco subguttatæ et bimaculatæ.

Body pitchy: head broader in front, with slight longitudinal ridges towards the hind part, longer than the prothorax: mouth luteous: thorax slightly ferruginous: legs testaceous; tarsi piceous: wings slightly gray; fore-wings with very indistinct pale brownish dots which are most apparent in front: veins pale testaceous; marginal region with twenty-three transverse veins which are more oblique and more approximate towards the tips; fore border of each wing with two oblong brown spots towards the tip. Length of the body 6 lines; of the wings 26—29 lines.

a—*c*. Silhet. From Mr. Argent's collection.

6. Chauliodes Virginiensis.

Capite thoraceque nigris, fulvo punctatis; alis latis hyalinis, venis nigro punctatis. Long. alar. 36 lin.

Hemerobius pectinicornis? *Linn. Syst. Nat.* i. 2, 911, 1. *Pal. Beauv. Ins. Afr. et Amer. Neur.* pl. 1, f. 2.

Hemerobius Virginiensis, *Drury, Ins. App.* vol. ii.

Chauliodes Virginiensis, *Westw. Edit. of Drury*, i. 105, pl. 46, f. 3.

Virginia.

7. Chauliodes subfasciatus.

Var? *Piceus; caput antice testaceum; alæ subcinereæ, fasciis duabus obliquis latis fuscis, anticæ fusco maculatæ, venis albido fasciatis basi luteis.*

Chauliodes subfasciatus, *Westw. Cab. Orient. Ent.* 70, pl. 34, f. 5.

Body pitchy: head broad in front, testaceous towards the mouth, much broader and a little longer than the prothorax: eyes prominent: prothorax a little broader in front, slightly contracted in the middle, rather broader than long, with a very slight dorsal ridge: wings slightly gray, with two broad oblique brown bands, one at the tip: fore-wings with numerous brown spots towards the base and with a few between the bands; veins brown, with whitish bands,

luteous at the base; marginal region with above twenty transverse veins. Length of the body 7 lines; of the wings 22 lines.

a. Silhet. From Mr. Stainforth's collection.

Group 2.

Antennæ bipectinatæ.

8. Chauliodes fasciatus.

Piceus; caput luteum; antennæ nigræ, bipectinatæ; pedes ferruginei, tarsis piceis; alæ fuscæ, albo fasciatæ et apice guttatæ.

Body pitchy: head luteous, striated longitudinally, broader in front, longer than the prothorax: mouth pitchy: eyes rather prominent: antennæ black, pectinated on both sides; branches short, clavate: legs ferruginous; tarsi pitchy: wings dark brown; across the middle disk of each a broad white band which does not extend to the hind border, and in the fore-wings is adorned with several brown dots; some white dots towards the tip of each wing, and a white spot near the tip of each fore border; veins brown, here and there white; costal region with about twenty-four transverse veins. Length of the body 7 lines; of the wings 24 lines.

a, *b*. New Holland.

Genus 6. HERMES.

Ocelli tres in fronte supra antennas. Mandibulæ parvæ vel mediocres. Antennæ serratæ. Tarsorum articulus 4us integer, minutus.

Hermes, *Gray*, *Griff. ed. Cuv. Anim. Kingd.* ii. 322.
Hemerobius, p., *Linn.*
Semblis, p., *Fabr.*
Chauliodes, p., *Latr.*; *Pal. Beauv.*; *Burm.*
Neuromus, *Ramb. Hist. Nat. Ins. Neur.* 441.

Epistoma slightly or not notched, a little rounded on each side: mandibles alike in both sexes; angles of the mentum moderately projecting: labial palpi 4-jointed; first joint rather large, the others short: maxillary palpi 6-jointed; the three last joints very short: maxillæ compressed, hardly prominent, seated alongside and not

only at the tip of the second joint of the maxillary palpi; external part thick, furnished with thick-set hairs along a part of the length, shorter than the other part: antennæ simple: first and fifth joints of the tarsi longer than the others; fourth a little shorter than the third.

The species included in this genus agree in having simple antennæ, but some of them are allied to Perla, others to Sialis or to Chauliodes, and a few to Raphidia.

1. Hermes maculatus.

Fusco-niger; capite et prothorace rufis; alæ fuscæ venis nonnullis transversis albis, anticæ macula ad costam triangulari alba.

Chauliodes serricornis, *Say, Keating and Long's Expedition to the Source of St. Peter's River*, ii. *Appendix* 47; *Journ. Acad. Nat. Sci. Philad.* ii. *Append.* 307; *Burm. Handb. Ent.* ii. 949, 1.

Neuromus maculatus, *Ramb. Hist. Nat. Ins. Neur.* 442, 3, pl. 10, f. 2.

Body pitchy: head red, much longer than broad, a little broader in front, striated longitudinally, longer and a little broader than the prothorax: eyes hardly prominent: antennæ black, slightly serrated: prothorax red, slightly longer than broad, piceous on each side and in front, indistinctly ridged towards the hind border, a little narrower in front than behind, slightly impressed on each side: wings dark brown, paler towards the tips and along the hind borders, adorned with numerous white spots which are largest and most confluent across the middle of the fore-wings and towards the tips of the hind-wings; marginal region with 18—21 transverse veins.

a. North America. Presented by Henry Jones, Esq.
b. North America. Presented by the Entomological Club.
c. North America.
d, *e*. ——— ?

2. Hermes ruficollis.

Niger; capite et prothorace rufis, hujus disco nonnunquam nigro; femora ferruginea; alæ fuscæ, maculis nonnullis basique albis.

Chauliodes (Hermes) maculipennis, *G. R. Gray, Edit. Cuv. Anim. Kingd.* ii. 331, 332, pl. 72, f. 1.

Semblis fuscata? *Fabr. Ent. Syst.* ii. 73, 5.
Neuromus ruficollis, *Ramb. Hist. Nat. Ins. Neur.* 443, 4.

a. Java. From Mr. Argent's collection.
b, *c*. ———? From Mr. Children's collection.

3. Hermes maculifera.

Niger; capite et prothorace rufis; caput sulcatum, thorace paullo latius; antennæ nigræ, subserratæ; prothorax apud medium subcontractus, latitudine longior; femora rufa; alæ latæ, fuscæ, apice subpallidiores, anticæ maculis 17 albis, posticæ maculis 3 basique albis.

Black: head and prothorax red: head with longitudinal furrows, a little broader in front than behind, rather broader than the prothorax: antennæ black, slightly serrated: prothorax a little contracted in the middle, longer than broad: femora red: wings broad, brown, a little paler towards the tips: fore-wings with about 11 mostly round white spots of various size: hind-wings white towards the base with the exception of a brown angular spot on the fore border, extending towards the base and to the disk; three round white spots of various size in the disk. Length of the body 11 lines; of the wings 32 lines.

a. Malabar. Presented by the Entomological Club.

4. Hermes Sinensis.

Ferrugineus; caput inter oculos piceum, thorace latius; antennæ nigræ; abdomen apice nigricans; pedes nigri, femoribus piceis; alæ subhyalinæ, guttis plurimis fasciaque obliqua fuscis.

Ferruginous: head piceous between the eyes, broader than the prothorax: antennæ black: abdomen blackish towards the tip: legs black; femora piceous: wings subhyaline, with numerous brown dots and with an oblique brown band which is interrupted towards the hind border of each of the four wings; veins testaceous; marginal region of the fore-wings with about thirty transverse veins. Length of the body 13 lines; of the wings 36 lines.

a. Hong Kong, China. Presented by J. C. Bowring, Esq.

5. Hermes guttiferus.

Obscure ferrugineus; alæ subcinereæ, anticæ fusco guttatæ, posticæ fusco trimaculatæ.

Body dark ferruginous: head broader in front, with some longitudinal ridges on the disk, a little broader and longer than the prothorax: eyes slightly prominent: prothorax a little impressed on each side, with a slight longitudinal furrow, much longer than broad: wings slightly gray; fore-wings adorned with very numerous brown dots of various size between all the veins, and with two brown spots towards the tip of the fore border; marginal region region with about twenty-eight transverse veins; hind-wings with three large brown spots, one adjoining the marginal region, the second on the fore border, between the first and third, which is in the disk. Length of the body 10? lines; of the wings 32 lines.

a. ———? From Mr. Children's collection.

6. Hermes dubitatus.

Piceus; femora subtus ferruginea; alæ cinereæ, apud venas fusco guttatæ.

Body pitchy: head a little broader in front, rather broader and longer than the prothorax, slightly striated on the hind part where the disk is luteous: prothorax broader than long, narrower in front, slightly rugulose longitudinally: femora ferruginous beneath: wings gray; fore-wings with very numerous brown dots along the veins; marginal region with above twenty transverse veins; dots on the hind-wings indistinct except along the fore border. Length of the body 10 lines; of the wing 38 lines.

a. ———?

7. Hermes indecisus.

Ferrugineus; caput antice testaceum, postice nigro-varium; antennæ piceæ; pedes testacei; alæ subcinereæ, anticæ submaculatæ.

Body dark ferruginous: head very little broader in front, a little broader but not longer than the prothorax, testaceous in front, with various black lines towards the hind border: antennæ pitchy, subserrate: prothorax hardly narrower in front, a little broader than

long, with a slight dorsal suture: legs testaceous: wings slightly gray: fore-wings with very indistinct darker spots; veins brown, with pale testaceous bands; marginal region with twenty-two transverse veins: hind-wings with testaceous veins. Length of the body 12 lines; of the wings 36 lines.

a, ——?

8. HERMES ANTICUS.

Luteus; prothoracis vittis duabus, abdomine pedibusque piceis; antennæ nigræ; alæ subcinereæ, fusco maculatæ et oblique subfasciatæ.

Body luteous: head a little broader in front, broader but hardly longer than the prothorax: eyes prominent: antennæ black, subserrate: prothorax linear, very little broader than long, with a short pitchy stripe on each side: abdomen pitchy: legs pitchy, pubescent: wings slightly gray, with many brown spots, the largest forming two very imperfect oblique bands; veins testaceous, blackish towards the fore border; marginal region with about thirty transverse veins. Length of the body 12 lines; of the wings 38 lines.

a. China. From Mr. Stevens' collection.

9. HERMES DIVERSUS.

Ferrugineus; caput vittatum, antice testaceum; antennæ piceæ; abdomen piceum; alæ longæ, angustæ, anticæ albidæ fusco guttatæ.

Ferruginous: head much broader than the thorax, striped, testaceous in front, contracted hindward: antennæ piceous: prothorax with a slight longitudinal furrow, its length a little exceeding its breadth: abdomen piceous: wings long and narrow; fore-wings dingy white, with numerous pale brown dots which are mostly on the pale testaceous veins; marginal region of the fore-wings with twelve transverse veins. Length of the body 13 lines; of the wings 34 lines.

a. New Zealand. Presented by the Rev. W. Colenso.
b. New Zealand. Presented by Dr. Hooker.

10. Hermes prasinus.

Viridis, depressus ; caput thorace paullo latius ; prothorax subtransversus, antice fere rectus, postice rotundatus ; setæ caudales 13-articulatæ ; alæ pallide virides. Long. alar. 24 lin.

Chloroperla prasina, *Newm. Zool.* iii. 853, 2.

This species seems to connect the Perlides with the Semblides.

a. New Zealand. Presented by Dr. Sinclair.

11. Hermes testaceus.

Testaceus ; antennis, prothoracis maculis quatuor, tibiis basi tarsisque nigris ; alis albis, venis transversis basi infuscatis.

Neuromus testaceus, *Ramb. Hist. Nat. Ins. Neur.* 442, 1, pl. 10, f. 1.

Like the three following species in structure.

a. East Indies.
b. Java. From Mr. Argent's collection.
c. ——— ?

12. Hermes hieroglyphicus.

Testaceus ; capitis maculis duabus, prothoracis maculis quatuor, mesothoracisque duabus nigris ; alis albis, strigis plurimis fuscis, venis transversis nigricantibus.

Neuromus hieroglyphicus, *Ramb. Hist. Nat. Ins. Neur.* 442, 2.

a. Venezuela. From Mr. Dyson's collection.

13. Hermes albipennis.

Testaceus ; caput thorace multo latius, maculis duabus lateralibus punctoque antico antennisque nigris ; thorax vittis duabus lateralibus abdominisque apice nigris ; alæ albidæ.

Pale testaceous: head much broader than the prothorax, with a black mark on each side behind the eyes, and with a black dot in front of the anterior ocellus, and having a tooth on each side, which is also a character of the two preceding species: antennæ black: first joint testaceous: prothorax having on each side a black interrupted stripe which is continued in a spot on each side of the mesothorax: abdomen black towards the tip: wings whitish; veins pale

testaceous; marginal region with about thirty-five transverse veins, which are mostly parallel to each other and at equal distances. Length of the body 14 lines; of the wings 46 lines.

a, *b*. Nepaul. From the Hardwicke bequest.

14. Hermes costalis.

Testaceus; caput thorace multo latius; antennæ nigræ; prothorax vittis duabus lateralibus interruptis nigris; abdominis segmenta marginibus posticis nigricantibus; tibiæ tarsique nigra; alæ subcinereæ, anticæ maculis albidis.

Testaceous: head longer and much broader than the prothorax: mandibles black: antennæ black; first and second joints testaceous: prothorax with a black interrupted stripe on each side: hind borders of abdominal segments blackish: tibiæ and tarsi black, the former pale testaceous towards the base: wings slightly gray, very shining; fore-wings with some round indistinct whitish spots of various size; veins testaceous; marginal region with about thirty-eight transverse veins which are mostly parallel to each other, and towards the tip are more contiguous and occasionally forked; a brown transverse spot in each of the areolets formed by these veins. Length of the body 11—12 lines; of the wings 44—48 lines.

a, *b*. North China, From Mr. Cuming's collection.

15. Hermes? griseus.

Alis cinereis albo maculatis.

Hemerobius griseus, *Fabr. Sp. Ins.* i. 386, 2; *Mant. Ins.* i. 244, 2; *Ent. Syst.* ii. *Gmel. ed. Syst. Nat.* i. 5, 2638, 16.

Tropical Africa.

16. Hermes? atratus.

Magnus, ater; thorace hirto; abdomine cylindrico; alis albidis, anticis nigro maculatis.

Hemerobius atratus, *Fabr. Sp. Ins.* i. 386, 3; *Mant. Ins.* i. 244, 3; *Ent. Syst.* ii. *Gmel. ed. Syst. Nat.* i. 5, 2638, 17.

Tropical Africa.

17. HERMES? GRANDIS.

Oblongus, flavescens, glaber; antennis maxillisque nigris; alis subæqualibus reticulato-venosis, maculis duabus pallide flavis.

Hemerobius grandis, *Thunb. Nov. Ins. Sp.* i. 28, f. 44. *Gmel. ed. Syst. Nat.* i. 5, 2639, 19.

Japan.

Genus 7. CORYDALIS.

Ocelli tres, in fronte supra antennas. Mandibulæ maximæ, longe exsertæ. Antennæ moniliformes, sensim angustiores. Tarsorum articulus 4us integer, minutus.

Raphidia p., *Linn.; Deg.*
Hemerobius, p., *Linn.* (olim); *Fabr.; Gmel.; Pal. Beauv.*
Corydalis, *Latr.; Burm.; Ramb.*

1. CORYDALIS CORNUTA.

Fusco-testacea; alæ cinereæ, areolis omnibus albo punctatis, venis fuscis et alternatim pallidis.

Raphidia cornuta, *Linn. Syst. Nat. ed.* 12, ii. 916, 3. *Deg. Ins.* iii. pl. 27, f. 1.
Hemerobius cornutus, *Linn. Syst. Nat. ed.* 10, 551, 14. *Fabr. Sp. Ins.* i. 392, 1; *Mant. Ins.* i. 146, 1; *Ent. Syst.* ii. 81, 1. *Gmel. ed. Syst. Nat.* i. 5, 2639, 30.
Corydalis cornuta, *Latr. Gen. Crust. et Ins.* ii. 916, 3. *Pal. Beauv. Ins. Afr. et Am. Neur.* pl. 1, f. 1. *Burm. Handb. Ent.* ii. 950, 1. *Ramb. Hist. Nat. Ins. Neur.* 440, 1. *Crochard, ed. Cuv. Règ. Anim. Ins.* pl. 104.

a. Columbia. From Mr. Turner's collection.
b, c. ——— ?

2. CORYDALIS CEPHALOTES.

Testaceo-cinerea; alæ infumatæ, venis transversis areolæ costalis crebrioribus nigris areolisque impunctatis; areolis vero discalibus quibusdam post radium albo punctatis.

Corydalis affinis, *Burm. Handb. Ent.* ii. 951, 2.
Corydalis cephalotes? *Ramb. Hist. Nat. Ins. Neur.* 441, 2.

Brazil.

Genus 8. RAPHIDIA.

Tarsi articulo 3o cordato, bilobo; 4o vix ullo.

Div. 1.

Caput longum, planum.

Raphidia, *Linn. Syst. Nat.* ii. 916; *Fabr.*; *Gmel.*; *Barbut*; *Berk.*; *Stew.*; *Turt.*; *Latr.*; *Leach*; *Wood*; *Curt.*; *Steph.*; *Schumm.*; *Perch.*; *Ramb.*; *Schneider*.

Rhaphidia, *Burm.*

1. RAPHIDIA NOTATA.

Capite gibbo, vertice latiori; ocellis obsoletis; prothoracis limbo laterali postico pallido; alarum venis nigris, stigmate longiori fusco tri- vel quadriareolato. Long. 7¾ lin.

Raphidia notata, *Fabr. Sp. Ins.* i. 402, 1; *Mant. Ins.* i. 251, 1. *Gmel. ed. Syst. Nat.* i. 5, 2648, 2. *Stew. El. Nat. Hist.* iii. 218. *Kirby and Spence*, i. pl. 3, f. 6. *Schumm. Beitr. zur Ent.* 13, 3. *Perch. Mém. Raph.* 2, f. 2. *Ramb. Hist. Nat. Ins. Neur.* 436, 1. *Schneider, Ent. Zeit. Stett.* vi. 252, 1.

Rhaphidia notata, *Burm. Handb. Ent.* ii. 964, 5.

a. ——— ? From Mr. Children's collection.

b. ——— ?

2. RAPHIDIA MAJOR.

Capite latiori, vitta lata rufa verticali; prothoracis limbo pallido; alarum venis testaceo-fuscis, stigmate brevi pallido triareolato. Long. 6½ lin.

Rhaphidia major, *Burm. Handb. Ent.* ii. 964, 4.

Germany.

3. RAPHIDIA MEDIA.

Vertice vitta obsoleta rufa; prothorace concolore; alarum venis omnibus nigris, areolis in margine omni postico furcatis, stigmate fusco plerumque triareolato. Long. 6 lin.

Rhaphidia media, *Burm. Handb. Ent.* ii. 964, 3.

Germany.

4. Raphidia Bœtica.

R. notatæ *affinis ; capite breviore, magis punctato postice plus quam retracto, rugoso ; prothorace graciliore, punctato ruguso ; alis angustioribus.*

Raphidia Bœtica, *Ramb. Hist. Nat. Ins. Neur.* 437, 2. *Schneider, Ent. Zeit. Stett.* vi. 253, 2.

South Spain.

5. Raphidia xanthostigma.

Alarum stigmate elongato pallido, biareolatæ. Long. 5 lin.

Raphidia xanthostigma, *Schummel, Beitr. zur Ent.* 12, 2. *Schneid. Mon. Raphid.* 71, 2, pl. 3, f. 8.
Rhaphidia xanthostigma, *Burm. Handb. Ent.* ii. 963, 1.
Raphidia ophiopsis, *Fabr. Ent. Syst.* ii. 99, 1.
Raphidia notata, *Perch. Mon. Raph.* 2, f. 1.
Raphidia cognata ? *Ramb. Hist. Nat. Ins. Neur.* 438, 3. *Schneider, Ent. Zeit. Stett.* vi. 254, 3.

Europe.

6. Raphidia Ophiopsis.

Atra, nitida ; clypeo, antennis basi, femoribus apice, tibiis tarsisque ochraceo-flavis ; abdomine lineis duabus lateralibus marginibusque segmentorum stramineis ; alarum stigmate brevi fusco biareolato, areolis quinque in apice alarum furcatis. Long. 4 lin.

Raphidia ophiopsis, *Linn. Syst. Nat.* ii. 402, 2 ; *Faun. Suec.* 1517. *Fabr. Sp. Ins.* i. 402, 2 ; *Mant. Ins.* i. 251, 2 ; *Ent. Syst.* ii. *Geoffr. Ins. Par.* ii. 233, 1. *Scop. Ent. Carn.* 711. *Roes. Ins.* iii. *App.* i. pl. 21, f. 6, 7. *Sulz. Hist. Ins,* pl. 25, f. 9. *Schæff. Elem.* pl. 107 ; *Icon.* pl. 95, f. 1, 2. *Deg. Ins.* ii. 2, 93, pl. 25, f. 4. *Gmel. ed. Syst. Nat.* i. 5, 2647, 1. *Shaw, Gen. Zool.* vi. 265, pl. 87, f. inf. *Sam. Ent. Comp.* 261, pl. 7, f. 6. *Curt. Brit. Ent.* vi. pl. 37. *Steph. Ill. Brit. Ent. Mand.* vi. 130, 1, pl. 31, f. 1. *Waterh. Trans. Ent. Soc. Lond.* i. 23, pl. 3, f. 1. *Schumm. Beitr. zur Ent.* 10, 1. *Ramb. Hist. Nat. Ins. Neur.* 439, 5. *Schneid. Mon. Raph.* 68, 1, pl. 2, f. a, b ; *Ent. Zeit. Stett.* vi. 255, 5. *Crochard, ed. Cuv. Règ. Anim.* 102, *Ins.* pl. 105, f. 4.
Rhaphidia ophiopsis, *Burm. Handb. Ent.* ii. 963.

Var. β. *Atra, nitida; capite magno linea postica picea; ore, antennis basi, tibiis tarsisque ochraceo-flavis; abdomine lineis duabus lateralibus stramineis, stigmate fusco.*

Raphidia megacephala, *Leach, MSS. Steph. Ill. Brit. Ent. Mand.* vi. 130, 2.

a—f. England.
g. Germany.
h. ——— ? From Mr. Children's collection.
i. ——— ?

7. Raphidia hispanica.

R. notata *paullo major; capite latiore, breviore, rufo fasciato, punctis subtilioribus crebrioribus; prothorace rugoso, transversim sulcato, rufo fasciato.*

Raphidia hispanica, *Ramb. Hist. Nat. Ins. Neur.* 438, 4. *Schneider, Ent. Zeit. Stett.* vi. 255, 4.

South Spain.

8. Raphidia Londinensis.

Nigra, nitida; ore, antennis basi, prothoracis lateribus, tibiis tarsisque ochraceo-flavis; abdomine flavo punctato; alis hyalinis, stigmate flavescente.

Raphidia Londinensis, *Leach, MSS. Steph. Ill. Brit. Ent. Mand.* vi. 130, 3.

R. ophiopsis? *Barbut, Gen.* 229, pl. 12. *Stew. El. Nat. Hist.* ii. 218. *Wood, Ill. Linn. Gen. Ins.* ii. 37, pl. 52.

a. England. Presented by F. Smith, Esq.
b—f. England.
g, h. ——— ?

9. Raphidia affinis.

Nigra, nitida; antennis basi, ore, prothoracis marginibus, pedibusque anterioribus ochraceo-flavis; abdomine punctis flavis; alis hyalinis, stigmate subflavescente.

Raphidia affinis, *Leach, MSS. Steph. Ill. Brit. Ent. Mand.* vi. 131, 4.

R. Londinensis var.?

a—c. England.

10. Raphidia maculicollis.

Nigra, nitida; clypeo, antennis basi, tibiis tarsisque ochraceo-flavis; prothorace fulvescente-ochraceo, nigro maculato, lateribus luteo-flavis; alis subflavescentibus, stigmate concolore, venis fuscescentibus.

Raphidia maculicollis, *Leach, MSS. Steph. Ill. Brit. Ent. Mand.* vi. 131, 5.
R. Ophiopsis var.?
a. England.

11. Raphidia confinis.

Nigra, nitida; ore fulvo; protharacis lateribus ochraceis; pedibus ochraceo-flavis; alis hyalinis, stigmate concolore, venis fuscis.

Raphidia confinis, *Steph. Ill. Brit. Ent. Mand.* vi. 131, 6.
R. notatæ var.?
a, b. England.

12. Raphidia crassicornis.

Ocellis nullis; pedibus totis pallidis; alarum stigmate elongato, fusco, uniareolato. Long. 4½ lin.

Raphidia crassicornis, *Schumm. Beitr. zur Ent.* 15, f. 4. *Perch. Mém. Raph.* pl. 66, f. 4. *Ramb. Hist. Nat. Ins. Neur.* 439, 6. *Schneid. Mon.* 89, pl. 7; *Ent. Zeit. Stett.* vi. 255, 6.
Rhaphidia crassicornis, *Burm. Handb. Ent.* ii. 964, 6.
Europe.

Div. 2.

Caput breve, convexum.

13. Raphidia varia.

Nigra; antennæ robustæ, breves, basi ferrugineæ: prothorax linearis, duplo longior quam latior; pedes rufescentes; alæ limpidæ, venis albo nigroque variis, stigmate fusco flavo fasciato.

Black: head hardly longer than broad, much broader than the prothorax, very convex above: antennæ short, stout, filiform, submoniliform, ferruginous at the base: prothorax linear; its length

about twice its breadth: legs reddish; coxæ black. Wings limpid; veins alternately black and white; subcubital and marginal veinlets towards the base clouded with black; stigma long, yellow in the middle, brown at each end. Appears to connect *Raphidia* with the *Hemerobii*. Length of the body 3 lines; of the wings 8 lines.

a. Brazil. From the nest of *Myrapetra scutellaris*. Presented by Walter Hawkins, Esq.

Fam. 2. HEMEROBIDES.

Corpus elongatum, molle. Caput trigonum, verticaliter inflexum. Frons elevata. Oculi extantes, semiglobosi. Palpi maxillares 5-articulati, labiales 3-articulati. Antennæ filiformes aut setaceæ, elongatæ, multi-articulatæ, inter oculos insertæ. Abdomen elongatum, compressum, subcylindricum, subfalcatum. Pedes graciles; calcaria fere obsoleta; tarsi breves, 5-articulati; articuli integri; ungues duo, parvi. Alæ æquales, amplæ, deflexæ, valde reticulatæ, costa distincta.

Hemerobius, p., *Linn.*
Raphidia, p., *Linn.*
Hemerobius, *Fabr.*
Mantis, p., *Fabr.*
Phryganea, p., *Fabr.*
Hemerobiini, p., *Latr.*
Termitines, p., *Latr.*
Hemerobidæ, *Leach; Steph.; Wesm.*
Stegoptera, p., *Duméril.*
Hemerobidæ, p., *Burm.*
Rhaphidiodea, p.; *Burm.*
Coniopterygides, *Burm.*
Hemerobides, p., *Pictet.*
Hemerobides, Nymphides, Mantispides et Coniopterygides, *Ramb.*
Hemerobiina, *MacLeay.*
Neuroptera, p., et Orthoptera, p., *Brullé.*
Hemerobiidæ et Mantispidæ, *Westw.*
Hemerobiina et Mantispina, *Newm.*

Genus 1. MANTISPA.

Pedes antici raptorii, femoribus incrassatis dentatis, tibiis arcuatis.

Mantispa, *Illiger*, *Käf. Preuss. Anh.; Latr.; Charp.; Erichs.; Burm.; Ramb.; Westw.*

Raphidia, p., *Linn.*; *Scopoli*; *Vill.*
Mantis, p., *Fabr.*; *Schr.*; *Stoll.*

1. MANTISPA SEMIHYALINA.

Obscure cærulea; antennis pedibusque anticis basi testaceis. Long. 8—10.

Mantispa semihyalina, *Serv. et St. Farg. Encycl. Méth.* x. 270. *Ramb. Hist. Nat. Ins. Neur.* 434, pl. 10, f. 5. *Westw. Trans. Ent. Soc. Lond. new series*, i. 253, 1.
Mantispa chalybea, *Erichson, Germar's Zeitsch. f. d. Ent.* i. 160, 1.
Mantispa grandis, *Burm. Handb. Ent.* ii. 967, 4.

Brazil, Surinam.

a. ———. From Mr. Shuckard's collection.
b, c. ———?

2. MANTISPA BRUNNEA.

Fusca; alis antice concoloribus, postice nisi ad basim hyalinis. Long. 9 lin.

Mantispa brunnea, *Say, Long's Exped. St. Peter's River*, vii. 309; *Amer. Ent.* ii. pl. 25. *Erichs. Germar's Zeitschr. Ent.* i. 161, 2. *Westw. Trans. Ent. Soc. Lond. new series*, i. 253, 2.

United States.

a. St. John's Bluff, East Florida. Presented by the Entomological Club.
b, c. Georgia. From Mr. Abbot's collection.

3. MANTISPA VARIA.

Castanea, nigro flavoque variegata; alis antice fulvis, margine postico fulvescente. Long. 6—7 lin. Var. *Corpore pedibusque unicoloribus, fusco-rufis.*

Mantispa varia, *Erichs. Germ. Zeitschr. Ent.* i. 161, 3. *Westw. Trans. Ent. Soc. Lond. new series*, i. 253, 2.

a. Central America. From Mr. Children's collection.

4. MANTISPA AMBUSTA.

Nigra; abdominis segmentis margine tibiisque flavis; alis hyalinis margine anteriore apiceque fuscis. Long. 7 lin.

Mantispa ambusta, *Erichs. Germ. Zeitschr. Ent.* i. 162, 4. *Westw. Trans. Ent. Soc. Lond. new series*, i. 254, 4.

Monte Video.

5. MANTISPA IRRORATA.

Fusco-cinerea; capitis thoracisque dorso flavescentibus; alis fusco irroratis. Long. 9 lin.

Mantispa irrorata, *Erichs. Germ. Zeitschr. Ent.* i. 162, 5. *Westw. Trans. Ent. Soc. Lond. new series*, i. 254, 5.

Brazil.

6. MANTISPA DECORATA.

Flava, fusco variegata; alis hyalinis, fusco maculatis. Long. 5—10 lin.

Mantispa decorata, *Erichs. Germ. Zeitschr. Ent.* i. 163, 6, pl. 11, f. 5. *Westw. Trans. Ent. Soc. Lond. new series*, i. 254, 6.

a. Brazil.

7. MANTISPA PROLIXA.

Flavo fuscoque varia; alis stigmate maculaque apicali fuscis. Long. 7½ lin.

Mantispa prolixa, *Erichs. Germ. Zeitschr. Ent.* i. 163, 7. *Westw. Trans. Ent. Soc. Lond. new series*, i. 254, 7.

South Brazil.

a. ? Georgia.
b. ? ——— ?

8. MANTISPA GRANDIS.

Fusca; prothorace cinereo; alis hyalinis, costa maculaque apicali fuscis. Long. 11 lin.

Mantispa grandis, *Erichs. Germ. Zeitschr. Ent.* i. 164, 8.

Mantispa Erichsonii, *Guérin, Icon. Règn. Anim. Ins.* 391. *Westw. Trans. Ent. Soc. Lond. new series*, i. 254, 8.

a. Port Natal. From. M. Gueinzius' collection.
b. Port Natal.

9. MANTISPA COSTALIS.

Fusca; prothorace abdomineque luteis; alis hyalinis, costa lutea. Long. 8 lin.

Mantispa costalis, *Erichs. Germ. Zeitschr. Ent.* i. 164, 9. *Westw. Trans. Ent. Soc. Lond. new series*, i. 254, 9.

Brazil.

10. MANTISPA PUSILLA.

Fusca, flavo variegata; prothorace tenuiter flavo lineato; alis flavicanti-hyalinis, costa fusca. Long. 4—6 lin.

Mantis brevicornis, *Deg. Ins.* vii. 620, 18, pl. 46, f. 9, 10.
Mantis pusilla, *Pall. Spicileg. Zool.* fasc. 9, 17, pl. 1, f. 9. *Fabr. Sp. Ins.* i. 351, 31; *Mant. Ins.* i. 230, 39; *Ent. Syst.* ii. 25, 51. *Stoll, Mant.* pl. i. f. 3. *Gmel. ed. Syst. Nat.* i. 4, 2052, 34. *Oliv. Enc. Méth.* vii. 631, 30.
Mantis brevicornis, *Deg. Ins.* vii. 620, pl. 46, f. 9, 10.
Mantispa pusilla, *Burm. Handb. Ent.* ii. 967, 3. *Ramb. Hist. Nat. Ins. Neur.* 432, 3. *Erichs. Germ. Zeitschr. Ent.* i. 165, 10. *Westw. Trans. Ent. Soc. Lond. new series*, i. 254, 10.

a, *b*. Cape. From the Hardwicke bequest.
c, *d*. Cape. Presented by R. W. Townsend, Esq.
e. Cape. From Mr. Shuckard's collection.
f. Port Natal. From Dr. Krauss' collection.
g. S. Africa. From Mr. Children's collection.

Var. Testaceous: head varied with yellow, with a brown spot on the vertex, and a short brown stripe on the face: antennæ dark brown, pubescent, imperfect in the specimen described, yellow at the base: prothorax very slender, dilated near the head, with a brownish stripe on the back and one on each side: abdomen with a ferruginous stripe on each side: fore-coxæ yellow; fore-femora with a ferruginous stripe on each side: wings limpid; stigma ferruginous; veins black; transverse veins of the discal areolets very undulating.

d. East Indies. From Archdeacon Clerk's collection.

11. Mantispa pagana.

Flava, fusco varia; antennis ferrugineis; alis hyalinis, costa flava, stigmate fusco. Long. 4—7. lin.

Mantis Styriaca, *Poda, Ins.* 101, pl. 1, f. 15.
Raphidia Mantispa, *Linn. Syst. Nat.* ii. 916, 2. *Scop. Ent. Carniol.* 272, 712. *Vill. Ent. Linn.* iii. 67, pl. 8, f. 13.
Mantis pagana, *Fabr. Syst. Ent.* 278, 20; *Spec. Ins.* i. 350, 29; *Mant. Ins.* i. 230, 37; *Ent. Syst.* ii. 24, 49. *Stoll, Mant.* pt. 2, f. 6. *Gmel. ed. Syst. Nat.* i. 5, 2052, 32. *Panz. Faun. Germ.* 50, 9. *Latr. Hist. Nat. Cr. et Ins.* xii. 110. *Rossi, Faun. Etrusc.* i. 261, 637, *(Ed. Hellw.* i. 324, 637*). Oliv. Enc. Méth.* vii. 631, 28.
Mantis pusilla, *Schr. Ins. Austr.* 241.
Mantispa pagana, *Illig. Käff. Pruss.* 499. *Latr. Gen. Crust. et Ins.* iii. 93, 1. *Charp. Hor. Ent.* 92. *Erichs. Germ. Zeitschr. Ent.* i. 66, 11. *Burm. Handb. Ent.* ii. 967, 1. *Ramb. Hist. Nat. Ins. Neur.* 431, 1. *Westw. Trans. Ent. Soc. Lond. new series*, i. 254, 11. *Crochard, ed. Cuv. Règ. Anim. Ins.* pl. 105, f. 3.

a. Frejus. Presented by the Entomological Club.
b. ——— ? From Mr. Children's collection.
c. ——— ? From Mr. Shuckard's collection.
d—g. ——— ?

12. Mantispa Perla.

Flava, fusco variegata; antennis nigris; alis flavicanti-hyalinis, costa testacea. Long. 5 lin.

Mantis Perla, *Pall. Spic. Zool. fasc.* ix. 16, pl. 1, f. 8.
Mantispa Christiana, *Charp. Hor. Ent.* 23.
Mantispa Perla, *Erichs. Germ. Zeitschr. Ent.* i. 167, 12. *Burm. Handb. Ent.* ii. 967, 2. *Ramb. Hist. Nat. Ins. Neur.* 432, 2. *Westw. Trans. Ent. Soc Lond. new ser.* i. 254, 12.
Mantispa Victorii, *Guér. Icon. Règn. Anim. Ins.* 391.

South Russia; Greece.

a. ——— ?

13. MANTISPA FLAVEOLA.

Flava, fusco varia; alis hyalinis, costa stigmateque flavis. Long. 5 lin.

Mantispa flaveola, *Erichs. Germ. Zeitschr. Ent.* i. 168, 13. *Westw. Trans. Ent. Soc. Lond. new ser.* i. 254, 13.

Pará.

14. MANTISPA DORSALIS.

Atra; prothorace toto corporisque dorso flavis; alis hyalinis, costa fusca. Long. 6 lin.

Mantispa dorsalis, *Erichs. Germ. Zeitschr. Ent.* i. 168, 14. *Westw. Trans. Ent. Soc. Lond. new ser.* i. 254, 14.

Caffraria.

15. MANTISPA FUSCIPENNIS.

Fusca; pectore pedibusque testaceis; alis fuscis, nitidis. Long. 5 lin.

Mantispa fuscipennis, *Erichs. Germ. Zeitschr. Ent.* i. 168, 15. *Westw. Trans. Ent. Soc. Lond. new ser.* i. 254, 15.

Caffraria.

16. MANTISPA TENELLA.

Flava; prothorace æquali subtiliter granulato; abdomine fusco variegato; alis hyalinis, costa pallida, stigmate fusco. Long. 4½—5 lin.

Mantispa tenella, *Erichs. Germ. Zeitschr. Ent.* i. 169, 16. *Westw. Trans. Ent. Soc. Lond. new ser.* i. 255, 16.

a. Port Natal. From M. Gueinzius' collection.

17. MANTISPA NANA.

Pallida; prothorace æquali subtiliter granulato; abdomine fusco-variegato; alis hyalinis, stigmate subfusco. Long. 4 lin.

Mantispa nana, *Erichs. Germ. Zeitschr. Ent.* i. 169, 17. *Westw. Trans. Ent. Soc. Lond. new ser.* i. 255, 17.

Dongola.

18. Mantispa gracilis.

Fusca; capite, prothorace pedibusque flavescentibus; prothorace æquali lævi; alis hyalinis, costa flava, stigmate fusco. Long. 5 lin.

Mantispa gracilis, *Erichs. Germ. Zeitschr. Ent.* i. 169, 18. *Westw. Trans. Ent. Soc. Lond. new ser.* i. 255, 18.

Brazil.

19. Mantispa viridula.

Pallide viridis; alis albo-hyalinis, costa stigmateque viridibus. Long. 4½ lin.

Mantispa viridula, *Erichs. Germ. Zeitschr. Ent.* i. 170, 19. *Westw. Trans. Ent. Soc. Lond. new ser.* i. 255, 19.

Brazil.

20. Mantispa notha.

Picea, pilosa; prothorace brevi; abdomine supra lobato; tibiis posticis compressis; alis inæqualibus, fusco maculatis. Long. 3½ lin.

Mantispa notha, *Erichs. Germ. Zeitschr. Ent.* i. 170, 20, pl. 2, f. 6. *Burm. Handb. Ent.* ii. 968, 5. *Westw. Trans. Ent. Soc. Lond. new ser.* i. 255, 20.

Anisoptera notha, *Schneider, Mon. Raphid.* 30.

Brazil.

21. Mantispa interrupta.

Pallida; abdomine linea dorsali incisurisque nigris; alis hyalinis, costa ferruginea ante apicem interrupta. Long. 6½ lin.

Mantispa interrupta, *Say, Amer. Ent.* ii. pl. 55. *Erichs. Germ. Zeitsch. Ent.* i. 171, 21. *Westw. Trans. Ent. Soc. Lond. new ser.* i. 255, 21.

North America.

22. Mantispa minuta.

Capite thoraceque cylindrico flavescentibus; abdomine virescente dorso flavescente; pedibus virescentibus; alis hyalinis, costa flavescente vel virescente.

Mantispa minuta, *Fabr. Syst. Ent.* 278, 21; *Sp. Ins.* i. 350, 30; *Mant. Ins.* i. 230, 28; *Ent. Syst.* ii. 24, 50. *Gmel. Ed. Syst. Nat.* i. 5, 2052, 33. *Oliv. Enc. Méth.* vii. 631, 29. *Erichs. Germ. Zeitschr. Ent.* i. 171, 22. *Westw. Trans. Ent. Soc. Lond. new ser.* i. 255, 22.

23. Mantispa flavo-maculata.

Flava; capite pedibusque posterioribus viridibus; prothorace lateribus fusco; abdomine pedibusque anticis ferrugineis; alis virescente-hyalinis.

——— *Stoll, Spectr.* vii. pl. 2, f. 7.

Mantispa flavo-maculata, *Latr. Gen. Crust. et Ins.* iii. 94. *Erichs. Germ. Zeitschr.* i. 172, 23. *Westw. Trans. Ent. Soc. Lond. new ser.* i. 255, 23.

Mantis Liliputiana, *Oliv. Enc. Méth.* vii. 640, 3.

Surinam.

24. Mantispa rufescens.

Obscure fusca; antennis filiformibus; alis flavescentibus, stigmate fusco.

——— *Stoll, Spectr.* 12, pl. 4, f. 15.

Mantispa rufescens, *Latr. Gen. Crust. et Ins.* iii. 94. *Erichs. Germ. Zeitschr. Ent* i. 173, 24. *Westw. Trans. Ent. Soc. Lond. new ser.* i. 255, 24.

Mantispa nabota, *Oliv. Enc. Méth.* vii. 604, 5.

Coromandel.

a. ? Ceylon. Presented by R. Templeton, Esq.

25. Mantispa Guerinii.

Atro-fusca; femoribus anterioribus latis, transverse rugosis; tibiarum et tarsorum spinis castaneis; antennis obscurioribus; alis angustatis, perlucidis, antice rutilis, apice obscurioribus.

Mantispa grandis, *Guér. Voy. de Duperrey, Ins. Atl.* pl. 10, f. 4, *Texte*, pt. 2, 11, 196. *Ramb. Hist. Nat. Ins. Neur.* 433, 4.
Mantispa Guerinii, *Westw. Trans. Ent. Soc. Lond. new ser.* i. 255, 25.

Amboina.

26. Mantispa auriventris.

Rufo-castanea; fronte luteo; abdomine flavo, fasciis quatuor anoque fuscis; alis hyalinis, anterioribus et margine inferioribus luteis, anticis macula exigua apicali obscurâ.

Mantispa auriventris, *Guérin, Mag. Zool.* 1838, *Ins.* pl. 202. *Westw. Trans. Ent. Soc. Lond. new ser.* i. 256, 26.

Egypt.

27. Mantispa nodosa.

Nigra; capite, antennis, prothorace et pedibus anticis ferrugineis; abdominis dorso in medio obscure fulvo; prothorace brevi nodoso; antennis 48-articulatis; alis subhyalinis, dimidio costali fulvo, basi fusco strigaque obliqua ante medium fusca, in posticis fere obliteratis. Alar. long. fere 24 lin.

Mantispa nodosa, *Westw. Cab. Orient. Ent.* 70, pl. 34; *Trans. Ent. Soc. Lond. new ser.* i. 256, 27.

Assam.

28. Mantispa Cora.*

Fusca; antennarum basis, facies, prothoracis latera (lineâ obliquâ interruptâ), mesothoracis scutellum, tuberculi ad alarum basin, metathoracis scutellum, abdominisque incisuræ flava; pedes varii.

Mantispa Cora, *Newm. Ent. Mag.* v. 401. *Westw. Trans. Ent. Soc. Lond. new ser.* i. 256, 28.

a. Malabar. Presented by the Entomological Club.
b. Philippine Isles. From Mr. Wood's collection.

29. Mantispa virescens.

Pallide viridi-flava ; antennæ rufescentes, apice obscuræ ; alæ albido-hyalinæ, venis viridi-flavis ciliatis, pterostigmate concolore.

Mantispa virescens, *Ramb. Hist. Nat. Ins. Neur.* 433, 5. *Westw. Trans. Ent. Soc. Lond, new ser.* i. 256, 29.

Equal to the smallest size of *M. pagana :* antennæ a little longer: prothorax a little thicker: anterior tibiæ shorter and broader: stigma very long, slightly villose: median longitudinal row of areolets with their lateral veins much sinuated.

Mantispa viridula? *Erichs.*

30. Mantispa gracilis.

Rufescens ; antennæ nigricantes, basi pallidæ ; abdomen cinereo-fuscum, flavo subnebulosum ; pedes albidi, tibiæ anticæ subrufescentes, antice striatæ ; alæ hyalinæ.

Mantispa gracilis, *Ramb. Hist. Nat. Ins. Neur.* 433, 6. *Westw. Trans. Ent. Soc. Lond. new ser.* i. 256, 30.

Mantispa iridipennis? *Guér. Icon. Règn. Anim. Ins.* 392. *Flava ; antennæ apice fuscæ ; alæ hyalinæ, læte iridescentes, venis stigmateque flavis.*

Size of *M. pagana ;* eyes larger, more prominent, more approximate, more excavated behind the antennæ: face with a black line: antennæ paler at the base: prothorax more slender, more gibbose, less dilated in front: anterior tibiæ with a dark line on their inner side: veins yellowish, slightly varied with brown: stigma a little narrower than that of *M. pagana.*

Colombia.

31. Mantispa apicalis.

Obscure fusca ; epistomate, abdominis basi supra cingulisque tribus pone medium utrinque flavis ; alis subæqualibus, anticis dilute flavo-fuscis, apice extremo fuscis, posticis limpidis, ad marginem exteriorem dilute flavo-fuscis. Long. 7 lin.

Mantispa apicalis, *Loew, Germ. Zeit.* iv. 433. *Westw. Trans. Ent. Soc. Lond. new ser.* i. 257, 31.

Rhodes.

32. Mantispa vittata.

Fusca; capite supra carinato; antennis pallidis, apice nigricantibus; abdomine flavo, vittis lateralibus latis duabus aliaque media angusta supra et infra fuscis; pedibus flavis, femoribus anticis apice intus nigris, spina 1a flava, apice nigra; alis hyalinis, stigmatibus fulvis. Long. 3—4 lin.; alar. 6—10 lin.

Mantispa vittata, *Guér. Voy. Coquille, Ins. Texte*, 196. *Westw. Trans. Ent. Soc. Lond. new ser.* i. 257, 32, pl. 17, f. 1.

New Holland.

33. Mantispa Australasiæ.

Fulvo-fusca; capite thoraceque subtus fulvescentibus; capite antice et oculorum marginibus flavis, vertice carina discali longitudinali; antennis fuscis; abdomine supra nigricante, vittis duabus lateralibus ventreque flavis, hoc fusco vittato; pedibus fulvo-flavis; alis flavo-hyalinis, venis stigmateque rufo-fuscis.

Mantispa Australasiæ, *Guér. Icon. Règn. Anim. Ins. Texte*, 392. *Westw. Trans. Ent. Soc. Lond. new ser.* i. 258, 33, pl. 17, f. 2.

a, *b*. West Australia. From Mr. Clifton's collection.
c. New Holland. Presented by the Haslar Hospital.
d. Swan River. Presented by Sir J. Richardson.
e. South Australia. From Mr. Stevens' collection.
f. Van Dieman's Land. From Dr. Hooker's collection.
g. Van Dieman's Land. Presented by the Rev. T. Ewing.
h. Van Dieman's Land. From Mr. A. J. Smith's collection.

34. Mantispa strigipes.

Castanea; facie flava, linea media nigra; vertice flavo vario; antennis brevibus, 25-articulatis; prothorace supra punctis nonnullis lineaque tenui media flavis; femoribus anticis extus linea media nigra; alis areolis septem obliquis discalibus. Long. 5½ lin.; alar. 12½ lin.

Mantispa strigipes, *Westw. Trans. Ent. Soc. Lond. new ser.* i. 259, 34, pl. 17, f. 3.

Adelaide.

35. Mantispa scutellaris.

Luteo-flava; capite magis castaneo; mesothorace supra lineis duabus nigris convergentibus, scutello magis elevatis; antennis brevibus obscure fuscis, 32-articulatis; abdominis segmentis fascia apicali nigra in medio interrupta. Long. 7 lin.; alar. 15 lin.

Mantispa scutellaris, *Westw. Trans. Ent. Soc. Lond. new ser.* i. 260, 35, pl. 17, f. 4.

New Holland.

36. Mantispa delicatula.

Picea; capite flavo vario; antennis longis, gracilibus, 44-articulatis; abdominis lateribus flavo punctatis; pedibus anticis elongatis, gracilibus, piceis, luteo striatis; alis elongatis, stigmate cinereo fusco cincto, sectoris 3i radialis anticarum areolis decem. Long. 4—7 lin.; alar. 10—15 lin.

Mantispa delicatula, *Westw. Trans. Ent. Soc. Lond. new ser.* i. 261, 36, pl. 17, f. 5.

a. Australia. From Mr. Argent's collection.

37. Mantispa discolor.

Fulvo-lutescens; prothorace opaco, granuloso, setoso; meso- et metanoti lateribus fuscis; pedibus anticis longis gracilibus, femoribus anticis intus macula elongata fusca, spinis nigris basi albidis, tarsis anticis biunguiculatis; alis elongatis, stigmate fusco, areolis obliquis tredecem. Long. 10½ lin.; alar. 23 lin.

Mantispa discolor, *Westw. Trans. Ent. Soc. Lond. new ser.* i. 262, 37, pl. 17, f. 6.

a. Australia. From the Rev. J. Wenham's collection.

38. Mantispa biseriata.

Lutea; verticis linea tenuissima media fusca; antennis gracillimis, 40-articulatis; prothoracis lateribus fuscis; alarum venis albidis nigro punctatis; areolis discalibus in medio vena transversa in duplice serie divisis. Long. 8 lin.; alar. 19 lin.

Mantispa biseriata, *Westw. Trans. Ent. Soc. new ser.* i. 263, 38, pl. 17, f. 7.

a. Australia. From Mr. Strange's collection.

39. Mantispa quadrituberculata.

Fusco-fulva, flavo nigroque varia; antennis brevissimis, 32-articulatis; pronoto carina transversa ante alteraque pone medium alarum, stigmate venisque subcostalibus fulvis, nubilaque apicali fusca. Long. 5—9 lin,; alar. 11—17 lin.

Mantispa quadrituberculata, *Westw. Trans. Ent. Soc. Lond. new ser.* i. 264, 39, pl. 18, f. 1.

a. North Bengal. From Miss Campbell's collection.

40. Mantispa tropica.

Fusco-picea, flavo varia; antennis gracilibus, 29-articulatis; prothorace subelongato, lineis duabus obliquis flavis; scutelli margineque postico segmentorum abdominalium tenuissime flavis; femoribus anticis intus et extus fuscis, margine tenui pallido. Long. 4½—5½ lin.; alar. 9—11 lin.

Mantispa tropica, *Westw. Trans. Ent. Soc. Lond. new ser.* i. 265, 40.

Gambia.

41. Mantispa areolaris.

Fusca, flavo varia; facie nigra, flavo marginata; antennis gracilibus, 34-articulatis; prothorace elongato angustato, parum transverse rugoso; scuti angulis anticis scutelloque flavis; alis hyalinis, areolis obliquis discalibus ordinariis 15 vel 16. Long. 10 lin.; alar. 23 lin.

Mantispa areolaris, *Westw. Trans. Ent. Soc. Lond. new ser.* i. 265, 41, pl. 18, f. 3.

Brazil.

42. Mantispa Javanica.

Nigra, flavo varia; faciei maculis tribus, labro, fasciaque transversa occipitali flavis; prothorace flavo, lineis duabus latis dorsalibus nigris; pedibus anticis flavis, femoribus extus et intus striga abbreviata basali nigra; alis hyalinis, stigmate sanguineo. Long. 8 lin.; alar. 16 lin.

Mantispa Javana, *Westw. Trans. Ent. Soc. Lond. new ser.* i. 267, 42.

Java.

43. Mantispa lineolata.

Flava, nigro variegata; facie flava, macula angulata subtus alteraque majori ad antennarum basim, macula labri alteraque parva triangulari verticali, nigris; antennis gracilibus nigris; prothorace fere lævi, elongato, strigis tribus longitudinalibus nigris; alarum stigmate nigro. Long. 6 lin.; alar. 13 lin.

Mantispa lineolata, *Westw. Trans. Ent. Soc. Lond. new ser.* i. 267, 43, pl. 18, f. 4.

a. Nepaul. From the Hardwicke bequest.

44. Mantispa Indica.

Fulva; facie linea fusca, media longitudinali, verticeque striga transversa fusca; prothorace flavo, lineis duabus lunatis lateralibus antice, lateribusque posticis fuscis; femoribus anticis intus nigricantibus; alis hyalinis, stigmate sanguineo. Long. 5—6 lin.; alar. 12 lin.

Mantispa Indica, *Westw. Trans. Ent. Soc. Lond. new ser.* i. 268, 44, pl. 18, f. 5.

a. Nepaul. From the Hardwicke bequest.

45. Mantispa Mozambica.

Luteo-fulva ; facie macula lunari, fasciaque transversa verticali nigris ; prothorace subrufescente, linea antice abbreviata nigra ; femoribus anticis luteis, linea tenui fere circulari intus notatis ; alis parum areolatis, stigmate nigro. Long. 4½ lin. ; alar. 8 lin.

Mantispa Mozambica, *Westw. Trans. Ent. Soc. Lond. new ser.* i. 269, 45, pl. 18, f. 6.

Mozambique.

46. Mantispa Fenella.

Fulva ; capite, antennis, tibiis posticis dilatatis, alarum anticarum fascia interrupta stigmateque posticarum nigricantibus ; antennis longis, gracilibus, 46-articulatis ; alis anticis ovalibus, posticis minoribus. Long. 3½ lin. ; alar. 8 lin.

Mantispa (Trichoscelia) Fenella, *Westw. Trans. Ent. Soc. Lond. new ser.* i. 269, 46, pl. 18, f. 7.

a. Pará. From Mr. Stevens' collection.

47. Mantispa viridis.

Viridis vel flava, rufo bivittata ; facies rufo varia ; antennæ rufescentes ; alæ limpidæ, venis pallidis nigro guttatis.

Mantispa viridis, *Newm. MSS.*

Green or yellow, with a reddish stripe on each side along the whole length of the body ; face variegated with red ; antennæ reddish, pubescent, compact, with about twenty joints ; prothorax linear, slender, broader towards the head, more than half the length of the rest of the body ; wings quite colourless ; veins pale green or yellow with black dots, arranged much like those of *M. Styriaca ;* transverse veins of the discal areolets more undulating. Length of the body 3½ lines ; of the wings 9 lines.

a. East Florida. Presented by the Entomological Club.

48. Mantispa ? perspicua.

Obscura; alæ hyalinæ, posticæ macula marginali apieeque fuscis.

Mantis perspicua, *Fabr. Mant. Ins.* i. 230, 36; *Ent. Syst.* ii. *Gmel. Ed. Syst. Nat.* i. 5, 2052, 31.

Cayenne.

Genus 2. HOPLOPHORA.

Caput transversum, pronum; cum oculis, thorace duplo latior; oculi magni, laterales, rotundati. Antennæ filiformes, corporis dimidio longiores, multi-articulatæ; articulo 1o magno, 2o parvo, 3o elongato, cæteris brevissimis; ante medium leviter incrassatæ ante apicem pedetentim attenuantes apice ipso paullo incrassato et cheliformi? Labrum elongatum, membranaceum, apice rotundatum. Mandibulæ validæ, corneæ, fere trigonæ, extus convexæ, intus concavæ; apice acuto, dente parvo contiguo; basi intus dente acuto. Maxillarum lacinia tenuis, marginibus reflexis, apice gracilis sed rotundata, extus subconcava intus prope basin, dente magno setoso instructa. Palpi maxillares 5-articulati, articulus 1us brevissimus fere reconditus, exteri elongati subæquales cylindrici; 5us incurvus. Labium fere quadratum, lateribus concavis; palpiger fere quadratum, medio emarginatum. Palpi labiales 3-articulati, articulis cylindricis subæqualibus, 3us incurvus; ligula quadripartita, lobi laterales subcylindrici, subpalpiformes, apicibus acutis; lobi interni breviores obtusiores, hirsutiores. Prothorax angustus, capite duplo longior. Corpus lineare, apice acuto ante apicem setis duabus brevibus 7-articulatis instructum. Alæ hyalinæ, reticulatæ, angustæ, sublineares, apice rotundatæ, area supracostali vix ulla. Pedes diversi; pedes antici quasi *Mantidis;* coxæ elongatæ; femora, præsertim basi, crassa, coxis vix longiora, subtus spinarum validarum triplici serie armata; tibiæ femoribus breviores, tenuiores, apice spina magna incurva definientes, subtus spinarum validarum unica serie armata; tarsi ante tibiarum apicem inserti, 5-articulati; articulus 1us elongatus, cæteris omnino longior, 2us brevis, 3us 4usque ad huc breviores, 5us 2um longitudine æquans; pedum anticorum structura manifeste raptoria; pedes posteriores simplices.

Hoplophora, *Perty, Delect. Anim. Artic. Bras.* 126.
Mantoida, *Newm. Ent. Mag.* v. 179.
Chæteessa, *Burm. Handb. Ent.* ii. 527.

Burmeister and Westwood place this genus with the *Mantidæ*.

1. HOPLOPHORA VALIDA.

Fusco-testacea; alis subcinereis, venis longitudinalibus obscurioribus. Long. 7 lin.; alar. 14 lin.

Hoplophora valida, *Perty, Del. Anim. Artic.* 126, pl. 25, f. 6.
Chæteessa filata, *Klug; Burm. Handb. Ent.* ii. 528.

Brazil.

2. HOPLOPHORA TENUIS.

Obscure fusca, glabra; antennæ nigræ, ante apicem albidæ; caput et prothorax linea communi longitudinali flavida signata; alæ glaberrimæ. Long 4⅔ lin.; alar 11 lin.

Hoplophora tenuis, *Perty, Del. Anim. Art.* 127, pl. 25, f. 7.
Mantoida nitida, *Newm. Ent. Mag.* v. 179.

Pará.

Genus 3. NYMPHES.

Ocelli nulli. Tarsi antici elongati, longissimi. Ungues elongati, graciles, plantula vix conspicua.

Nymphes, *Leach, Zool. Miscell.* i. 102, pl. 45. *Burm. Handb. Ent.* ii. 982.

Nymphides (Nymphes), *Ramb. Hist. Nat. Ins. Neur.* 412.

Ocelli none: labrum notched in the middle: last joint of the maxillary palpi cylindrical, obtuse, a little longer than the preceding; last joint of the labial palpi short spindle-shaped, a little longer than the preceding, much attenuated at its tip: antennæ filiform, at least as long as the thorax; middle joints a little thicker than the others: hind-shanks with a pair of almost obsolete spurs; tarsi shorter than the tibiæ, composed of five short joints; claws simple, bent, furnished with onychia almost as long as themselves: fore-wings with the second and third veins re-united before the tip, and at the base a little cross-vein, which parting from the third vein ends in the fifth.

1. Nymphes myrmeleonides.

Rufescens; antennæ nigræ, apice rufæ; alæ hyalinæ, apice rufescentes albo maculatæ.

Nymphes myrmeleonoïdes, *Leach, Zool. Miscel.* i. 102, pl. 46. *Ramb. Hist. Nat. Ins. Neur.* 412. *Crochard, ed. Cuv. Règn. Anim.* pl. 103, f. 5.

Nymphes myrmecoleontoïdes, *Burm. Handb. Ent.* ii. 983.

a. New Holland. Presented by the Entomological Club.
b. New Holland. From Mr. Milne's collection.
c—g. New Holland.

2. Nymphes extraneus.

Testaceus; caput prothorace multo latius; antennæ nigræ; prothorax nigro varius, duplo longior quam latior; abdomen piceum, apice testaceum; alæ albidæ, longæ, angustæ, subacuminatæ, venis testaceis nigro variis.

Testaceous: head much broader than the prothorax: antennæ black, setaceous, submoniliform, pubescent, testaceous towards the base, much shorter than the wings: prothorax hairy, a little narrower in front, with a black streak along each side and with a black band along the fore border; its length about twice its breadth: abdomen pitchy, testaceous at the tip: legs pale testaceous: wings whitish, rather long and narrow, slightly acuminated; veins testaceous, here and there black, especially in the fore-wings; subcostal veinlets very numerous; second sector parallel with the radius, the intervening areolets mostly almost square; it emits seven successive branches; areolets in the disk very numerous, all forked; stigma long, pale testaceous; fore-wings longer than the hind-wings. Length of the body 7 lines; of the wings 28 lines.

a. ——— ?

3. Nymphes sejunctus.

Luteus; abdomine basi et metathorace fuscis; caput ferrugineo vittatum, prothorace multo latius; antennæ flavæ; prothorax duplo longior quam latior, antice angustior, nigro bimaculatus, lateribus viridibus; mesothorax nigro unimaculatus; alæ limpidæ, venis viridibus, venulis basi nigris.

Pale luteous: head much broader than the prothorax, with an interrupted ferruginous stripe: eyes very prominent: antennæ yellow: prothorax green on each side, narrower in front, with two black

dorsal spots, one towards the fore border, the other towards the hind border, its length full twice its breadth: mesothorax with a black spot in front of the scutum: abdomen towards the base and metathorax brownish: legs yellow: wings limpid; veins pale green, much like those of *N. extraneus* in structure, but less numerous; transverse veinlets more or less black towards the base and along parts of the hind border; stigma slightly testaceous, very faint: fore-wings deeply emarginate on the hind border at the base. Length of the body 6 lines; of the wings 20 lines.

a. West Australia. From Mr. Clifton's collection.

Genus 4. POLYSTŒCHOTES.

Ocelli nulli. Tarsi antici tibiæ æquales, ungues elongati, graciles, plantula vix conspicua.

Polystœchotes, *Burm. Handb. Ent.* ii. 982.
Hemerobius, p.? *Fabr.*

1. Polystœchotes sticticus.

Fuscus, subtus pallidior; alarum anticarum venæ albo variegatæ vittisque transversis irregularibus fuscis.

Polystœchotes sticticus, *Burm. Handb. Ent.* ii, 982.
Hemerobius nebulosus? *Fabr. Ent. Syst. Suppl.* 202, 1, 2.

North America.

Genus 5. OSMYLUS.

Caput transversum. Frons tumidus. Labrum rotundum. Labium apice rectum, transversum, margine lineari subfisso. Oculi mediocres. Antennæ breves, moniliformes. Prothorax elongato-cylindricus, valde distinctus, antice rotundatus, mesothorace multo angustior. Metathorax tuberculatus. Alæ longæ, pilosæ, sublanceolatæ, margine postico subacutæ; areolæ discales rhomboidales aut polygonæ; venæ marginales bifidæ; costa alarum anticarum subdilatatæ subrotundatæ.

Osmylus, *Latr.; Leach; Sam.; Steph.; Burm.; Ahrens; Wesm.; Ramb.*
Hemerobius, p., *Linn.; Vill.; Oliv.; Sulz.; Schr.; Fabr.; Rœm.; Berk.; Turt.; Don.; Shaw.*
Osmylina, *Schneider, Monogr. Chrysop.* 35.

" Subcosta et radius paralleli, sed ante alæ acumen conjuncti; duo tantum sectores, a radio oriundi, mox in ramos partiti; multæ areolæ discoidales, perpendiculares, inter sectorum ramos formatæ; cubitus cum ramis suis aream cubitalem e duabus (vel tribus) cellularum seriebus compositam formans; antennæ corpore breviores, moniliformes; interdum ocelli tres." *Schneider.*

Schneider in his Monograph on *Chrysopa*, uses the following nomenclature for the veins and areolets of the wings.

Costa; subcosta; radius; sector radii 1us; sector radii 2us; cubitus; ramus cubiti; postcosta; vena basalis vel tendo; venulæ subcostales; pterostigma; venulæ sectoris radii 2i; venulæ radiales; venulæ sectoris radii 1i, vel obliquæ; venulæ cubitales; venulæ gradatæ seriei 1æ; venulæ gradatæ seriei 2æ; venulæ marginales furcatæ; venulæ marginales furcatæ simplices; areola cubitalis cum venula diversoria; venulæ subcubitales; ramus cubiti vel vena subcubitalis; ramus postcostæ, vel veno postcostalis; tendo 1us.

1. Osmylus chrysops.

Fuscus; caput et pedes testacea; alæ hyalinæ, anticæ limbo præsertim posticæque apud costam fusco maculatæ.

Hemerobius chrysops, *Linn. Faun. Suec.* 1505; *Syst. Nat.* ii. 912, 4. *Sulz. Gesch.* pl. 25, f. 1. *Schrank, Faun. Boic.* ii. 188, 1. *Ræm. Gen.* pl. 25, f. 1. *Berk. Syn.* i. 151. *Don. Brit. Ins.* vi. 21, pl. 188. *Shaw, Gen. Zool.* vi. 259, pl. 83, *fig. med.*

Hemerobius fulvicephalus, *Scop. Ent. Carn.* 706. *Schr. Ins. Austr.* 311, 622. *Villers, Ent. Linn.* iii. 55, 20, pl. 7, f. 7.

Hemerobius maculatus, *Fabr. Ent. Syst.* ii. 85, 7. *Rocs. Ins.* iii. 126, pl. 21, f. 8. *Turt. Syst. Nat.* iii. 401. *Oliv. Enc. Méth.* vii. 61, 9.

Osmylus maculatus, *Latr. Hist. Nat. Ins.* xiii. 39, 1; *Gen. Crust. et Ins.* iii. 197, 1. *Leach, Edin. Enc.* ix. 138. *Sam. Ent. Comp.* 260, pl. 7, f. 4. *Burm. Handb. Ent.* ii. 983, 1. *Ahrens, Faun. Ins. Eur.* vi. 17. *Ramb. Hist. Nat. Ins. Neur.* 415, 1. *Steph. Ill. Brit. Ent. Mand.* vi. 99, 1. *Wesm. Mon. Hémérob. Belg.* 18, 1. *Bull. Acad. Roy. Brux.* viii. 220. *Crochard, ed. Cuv. Règn. Anim.* pl. 103, f. 4.

a—e. England.
f, g. Germany.
h, i. ———? From Mr. Children's collection.

2. Osmylus strigatus.

Niger; capite rufo; pedibus ferrugineis; alis anticis nigris, strigis basalibus transversis, arcula ad marginem posticum, maculisque duabus magnis in margine antico sulphureis; posticis flavis, fascia lata ante apicem nigra.

Osmylus strigatus, *Burm. Handb. Ent.* ii. 984, 2. *Ramb. Hist. Nat. Ins.* 415, 2.
Chrysopa maculipennis, *White, Eyre's Travels, Appendix.*

Subcostal and marginal veinlets much like those of *O. chrysops*; many transverse veins between the radial vein and the subcostal vein; space between the second sector and the radial vein much broader; areolets of the disk mostly quadrilateral and transverse: prothorax subcylindrical, tapering from the mesothorax to the head; its length about thrice its breadth.

a. Australia. Presented by J. C. Bowring, Esq.
b, *c*. Australia. From the Rev. J. Wenham's collection.
d. Australia. From Mr. Argent's collection.
e. Australia. From Mr. Stevens' collection.

3. Osmylus validus.

Piceus, crassus; prothorax linearis; pedes ferruginei; alæ cinereæ, anticæ fusco signatæ, marginibus albo maculatis.

Subcostal veinlets much like those of *O. chrysops*; space between the second sector and the radius much narrower; its veinlets much less numerous: marginal veinlets more numerous, more oblique towards the base in all the wings. In the hind-wings the space between the second sector and the radius is broader, and the space between the two sectors has much fewer transverse veinlets; the gradate veinlets in the disk on all the wings form only one series, whereas they form two and more in *O. maculatus*. Body pitchy, stout, pubescent: head very little broader than the prothorax, which is hairy, linear, and much broader than long: legs ferruginous: wings gray: fore-wings with very numerous brown marks which are most prevalent about the margin, along which are some whitish spots; the largest brown spot on the gradate veinlets below the middle: hind-wings with some slight whitish and brown marks along the border: veins black, with whitish bands. Length of the body 7—10 lines; of the wings 23—28 lines.

a. United States. Presented by the Entomological Club.
b. ——— ? From Mr. Milne's collection.
c—e. ——— ?

4. Osmylus tenuis.

Testaceus; caput flavo varium; prothorax lineuris, albidus, fusco strigatus; abdominis dorsum piceum; alæ subcinereæ, angustæ, anticarum venis fusco albidoque alternatim fasciatis.

Subcostal veinlets much like those of *O. chrysops;* veinlets of the second sector more numerous; areolets in the disk more numerous, especially in the hind-wings, more regular in form, generally rectangular; marginal areolets much more numerous. Testaceous: head yellow on each side by the eyes, and with some yellow spots in front: antennæ pale testaceous, very pubescent: prothorax linear, whitish, with some brownish streaks; its length about twice its breadth: abdomen pitchy above except at the tip: legs pale testaceous: wings slightly gray, narrow; stigma a little darker; veins of the fore-wings alternately brown and whitish, of the hind-wings testaceous. Length of the body 4½ lines; of the wings 18 lines.

a, b. Van Dieman's Land. From Dr. Hooker's collection.
c. Adelaide. From Mr. Stevens' collection.

5. Osmylus conspersus.

Testaceus; caput fusco maculatum; prothorax linearis, nigro 6-maculatus; thoracis discus piceus, flavo bimaculatus; abdomen piceum; alæ sublimpidæ, marginibus apice flavo maculatis, venis fusco albidoque alternatim fasciatis, transversis fusco nebulosis.

Veins of the wings much like those of *O. chrysops;* areolets of the disk more regular in form especially in the fore-wings, and mostly quadrilateral. Testaceous: head with some brown spots on the vertex: antennæ pale testaceous, pubescent: prothorax linear, with six black spots, not longer than broad: mesothorax and metathorax pitchy with a yellow spot on each disk: abdomen pitchy: legs pale testaceous; wings almost limpid; some yellowish marks on the borders towards the tips; veins alternately brown and whitish; transverse veins clouded with brown, of which there are a few spots in the disk and along the fore border. Length of the body 4 lines; of the wings 16 lines.

a. East Indies. From Archdeacon Clerk's collection.

6. Osmylus longipennis.

Piceus; prothorax linearis; pedes testacei, fasciis tarsisque piceis; alæ cinerascentes, longissimæ, anticæ fusco guttatæ.

Subcostal veinlets much more numerous than in *O. chrysops*, and more contiguous towards the base; veinlets of the sector of the second radius also much more numerous; gradate veinlets forming many more series; veins more oblique towards the tips; marginal veinlets much more numerous; areolets in the disk much more numerous, more alike and regular in form, generally almost square. Pitchy: prothorax linear, longer than that of *O. chrysops*, and not narrower in front as is the latter: legs testaceous, with pitchy bands: tarsi pitchy: wings grayish, very long; fore-wings very thickly covered with brown dots, many of which are confluent; veins brown. Length of the body 5 lines; of the wings 30 lines.

a. New Holland.

7. Osmylus tuberculatus.

Testaceus, fusco varius; antennis pedibusque flavis; alæ hyalinæ, venis albidis fusco variis, venulis nonnullis transversis fusco nebulosis, stigmate flavescente; tuberculo una fusca flavo vittata in alæ anticæ margine postico.

Structure of the wings like that of *O. chrysops:* transverse veins of the fore-wings less numerous. Testaceous, with brown marks: antennæ and legs pale yellow: wings hyaline; veins whitish, here and there with brown bands; a few of the transverse veins clouded with brown; stigma yellowish; a brown tubercle with yellow stripes on the hind border at one-third of the length from the base. Length of the body 5 lines; of the wings 18 lines.

a. East Indies. From Archdeacon Clerk's collection.

8. Osmylus longicornis.

Testaceus, fusco subnotatus; antennæ stramineæ, pubescentes, gracillimæ, alis multo longiores; pedes straminei; alæ hyalinæ, angustæ, antice fusco notatæ, venis albidis fusco variis.

Allied to *O. chrysops:* distinguished from all the other species of *Osmylus* by its very long antennæ, and by the marginal region which is almost equal in breadth along most of the length, and is narrower towards the tip than that of *O. chrysops;* areolets and

marginal veins fewer than in the last species. Testaceous, slightly marked with pale brown; antennæ straw-colour, pubescent, very slender, very much longer than the wings: legs straw-colour: wings hyaline, rather long and narrow; veins of the fore-wings alternately whitish and brown, of the hind-wings whitish; some brown spots on the space between the subcosta and the radius. Length of the body 4 lines; of the wings 20 lines.

a. Georgia. From Mr. Abbot's collection.

Genus 6. CHRYSOPA.

"Subcosta et radius paralleli et segregatim usque ad alæ acumen percurrentes; duo sectores simplices prope ad basin oriundi, inter quos multæ areolæ discoidales oblique positæ, venulis earum finalibus simpliciter furcatis; cubitus cum primo radii sectore aream cubitalem angustam formans; antennæ setaceæ, longitudine corpus vel æquantes, vel superantes." *Schneider.*

Hemerobius, p., *Linn.; Fabr.; Scop.; Schr.; Oliv.; Rossi; Panz.; Latr.; Donov.; Shaw; Ratz.; Guér.; Zett.*

Chrysopa, *Leach; Sam.; Curt.; Steph.; Burm.; Evans; Wesm.; Brauer.*

Hemerobius, *Ramb.*

Chrysopina (Chrysopa et Apochrysa), *Schneider.*

Div. 1.

"Caput antice conicum, paullo elongatum; antennarum articuli in apice pilis setosis duobus oppositis ornati; alæ inferiores superioribus paullo breviores; in alæ area discoidali duæ venularum gradatarum series; area cubitalis angusta, e cellulis cubitalibus plerumque quinquangulis vel quadrangulis composita; venula cellulam cubitalem (plerumque) tertiam secans aut curvata, ante primi sectoris radii primam venulam transversalem in hunc aperta, aut directa cum ipsa proxima venula cubitali conjuncta." *Schneider.*

Subdiv. 1.

Labrum margine anteriore integrum, non emarginatum.

Sect. 1.

Antennarum articulus 2us non maculatus, vel rarissime superne tantum maculis insignis.

Subsect. 1.

Alarum venæ omnes unicolores.

Group 1.

Corpus viride, vitta dorsali tantum conspicua, aliis picturis plane deficientibus.

1. Chrysopa vittata.

Læte viridis; vitta per caput totumque dorsum percurrente flavida; antennis fulvis brevibus, primo articulo longo, incrassato; alis angustis, acuminatis, costa in mare ante mediam partem valde introrsum curvata, venis omnibus pallide viridibus; venulis gradatis numerosis, ambabus seriebus sibi approximatis, parallelis; costæ et venarum fimbriis brevissimis, nigris.

Chrysopa vittata, *Wesm. Bull. Acad. Brux.* viii. 211, 7. *Schneid. Mon. Chrys.* 65, 1, pl. 7.
———— ? *Roesel, Insekt. Belust.* iii. 127, pl. 21, f. 4.
———— ? *Reaum. Ins.* iii. 411, pl. 33, f. 2, 4—6.
Hemerobius albus, *Oliv. Enc. Méth.* vii. 60, 7. *Fabr. Ent. Syst.* ii. 82, 4. *Panz. Faun. Ins. Germ.* 87, 14.
Hemerobius flavus? *Scopoli, Ent. Carn.* 270, 707.
Chrysopa alba, *Burm. Handb. Ent.* ii. 2, 981, 13. *Ratz. Forst. Ins.* pl. 14, f. 6. *Brauer, Beschr. Osterreich. Artzn. Chrys. Sp.* 5.
Chrysopa perla, *Steph. Ill. Brit. Ent. Mand.* vi. 105, 12. *Evans, Monogr. Chrys. Trans. Ent. Soc. Lond.* v. 4, 78, pl. 9, f. 4. *Ent. Mag.* iv. 176.
Hemerobius Perla, *Don. Ins. Brit.* viii. pl. 277, f. 2. *Shaw, Gen. Zool.* vi. 258, pl. 83, fig. sup. *Crochard, ed. Cuv. Règn. Anim. Ins.* 99, pl. 103, f. 3.
Hemerobius proximus? *Ramb. Hist. Nat. Ins. Neur.* 425, 4.

a—g. England.
h—j. ———? From Mr. Children's collection.
k. Malaga. Presented by Benjamin Frend, Esq.

2. CHRYSOPA CONGRUA.

Flava, gracilis; capitis latera antica rufescentia; antennæ ferrugineæ; prothorax latior quam longior; alæ limpidæ, sat angustæ, venis stigmate pedibusque viridibus.

Pale yellow, slender: head reddish on each side towards the mouth: antennæ ferruginous, pale yellow towards the base: prothorax almost linear, broader than long: abdomen wanting: legs pale green: wings limpid, rather narrow; veins pale green; cubital areolet less than one-fourth of the size of the adjoining subcubital areolet; stigma pale green. Length of the body 3½ lines; of the wings 11 lines.

a. West Africa. From Mr. Stevens' collection.

3. CHRYSOPA REMOTA.

Testacea, valida; antennæ alis vix longiores; prothorax latior quam longior, antice vix angustior; alæ limpidæ, sat breves, venis viridibus, stigmate testaceo.

Testaceous, stout: antennæ very little longer than the wings: prothorax broader than long, a little narrower in front: abdomen slightly ferruginous, testaceous at the tip: wings limpid, rather short, of moderate breadth; veins pale green, bristly; first series of gradate veinlets incomplete towards the tip; cubital areolet much less than half the size of the adjoining subcubital areolet; stigma pale testaceous. Length of the body 5½ lines; of the wings 18 lines.

a, *b*. Navigator's Islands.
c. Loochoo Islands. Presented by Capt. Beechey.

4. CHRYSOPA OCEANICA.

Testacea; prothorax multo longior quam latior, antice paullo angustior, lateribus rufescente-viridibus; alæ limpidæ, angustæ, venulis stigmateque testaceis.

Very nearly allied to *C. remota*. Testaceous: prothorax a little narrower in front, much longer than broad; sides pale green, with a slight reddish streak in front: wings limpid, rather narrow, moderately long; veins pale testaceous; first series of gradate veinlets incomplete towards the tip; cubital areolet less than half the size of the adjoining subcubital areolet; stigma pale testaceous. Length of the body 4½ lines; of the wings 16 lines.

a. Sandwich Islands. Presented by Capt. Beechey.

5. CHRYSOPA BASALIS.

Ferruginea, subtus testacea; prothorax paullo longior quam latior, antice vix angustior; pedes testacei; alæ limpidæ, venulis testaceis distinctissimis.

Ferruginous, testaceous beneath: antennæ testaceous towards the base: prothorax a little longer than broad, hardly narrower in front: legs pale testaceous: wings limpid, rather short and narrow; veins testaceous, strongly marked: second series of gradate veinlets incomplete at the tips; cubital areolet less than half the size of the adjoining subcubital areolet. Length of the body 3 lines; of the wings 10 lines.

a. Loochoo Islands. Presented by Capt. Beechey.

6. CHRYSOPA CONCOLOR.

Flava; antennæ fuscæ, graciles, alis vix breviores; prothorax paullo latior quam longior, antice angustior, lateribus subangulatis et antice fusco vittatis; alæ limpidæ, angustæ, venis stigmateque viridibus.

Pale yellow: antennæ slender, brown, pale yellow towards the base, nearly as long as the wings: prothorax a little broader than long, narrower in front, having on each side a slight angle in front of which there is a pale brown stripe: abdomen wanting: wings limpid, rather narrow; veins pale green; second series of gradate veinlets rather irregular, near the forked marginal veinlets which are short; areolets large; veinlets rather few; stigma greenish. Length of the body 3 lines; of the wings 12 lines.

a. Congo. Presented by Sir J. Richardson.

Group 2.

Caput rubro vel nigro pictum.

7. CHRYSOPA VULGARIS.

Læte viridis; thorace et abdomine vitta media flavida; vitta sanguinea ab utraque parte in genis ante oculos et stria in clypei lateribus; antennis fulvis; alis angustis, acuminatis; costæ fimbriis sparsis, haud longis, cum reliquarum venarum fimbriis longioribus, nigris; venula tertiæ areolæ cubitalis diversoria ante primam sectoris radii primi venulam transversam in ipsum aperta; duabus venularum gradatarum seriebus parallelis.

———————? *Barbut, Gen.* 220, pl. 22.
———————? *Roesel, Ins. Belust.* iii. 127, pl. 21, f. 5.
———————? *Reaum. Ins.* iii. 393, 412, pl. 33, f. 14, 15. *Göd.* ii. 40, pl. 7, f. 14. *Lister on Göd.* 93, 104. *Albin*, pl. 64.

Hemerobius perla, *Fabr. Ent. Syst.* ii. 82, 2. *Scop. Ent. Carn.* 271, 709. *Oliv. Enc. Méth.* vii. 59, 5. *Schrank, Ins. Austr.* 311, 623; *Faun. Boic.* ii. 189, 1922. *Stew. El. Nat. Hist.* ii. 216. *Don: Brit. Ins.* viii. pl. 277, f. 2. *Turt. Syst. Nat.* iii. 401. *Shaw, Gen. Zool.* vi. 258, pl. 83, f. sup. *Latr. Hist. Nat. Crust.* xiii. 37, 1. *Rossi, Faun. Etrusc. Ed.* ii. 2, 13, 683. *Panz. Faun. Ins. Germ.* 87, 13. *Labram a Imhoff, Ins. Schweiz.* iv. 5, 6. *Ratz. Forst. Ins.* iii. 247, pl. 26, f. 6, F.

Chrysopa affinis, *Steph. Ill. Brit. Ent. Mand.* vi. 104, 11. *Evans, Mon. Chrys. Trans. Ent. Soc. Lond.* v. 4, 78, pl. 9, f. 2.

Chrysopa vulgaris, *Schneid. Mon. Chrys.* 68, 2, pl. 8.

Hemerobius pectinicornis, *Berk. Syn.* i. 151.

Chrysopa perla, *Wesm. Bull. Acad. Brux.* viii. 1, 207, 1. *Petagna, Ins. Cal.* 336, 1, x. 17. *Westw. Class.* ii. 46; *Ent. Text-book*, pl. 3. *Burm. Handb. Ent.* ii. 980, 4. *Ratz. Forst. Ins.* pl. 14, 8. *Brauer, Beschr. Osterreich. Arten. Chrys.* x. *Sp.* 1. *Larva*, pl. 2, f. 8.

Var. *α.* primaveria, *Brauer.*

Var. *β.* incarnata, *Kollar.* Chrysopa carnea, *Steph. Ill. Brit. Ent. Mand.* vi. 103, 7. *Evans, Mon. Chrys. Trans. Ent. Soc. Lond.* v. 4, 78, pl. 9, f. 6.

Var. *γ.* rubro-punctatata, *Brauer.* Hemerobius biseriatus, *Schummel, MSS.*

Europe; Asia Minor.
a—f. England.
g—i. Nice. From Dr. Leach's collection.
j—m. ———? From Mr. Children's collection.
n. South France. Presented by Lady Seymour.

8. Chrysopa gracilis.

Sordide fusco-viridis; palpis fuscis; puncto fusco ante oculos posito; clypeo et labro subrubris; alis albidis longis, angustissimis, acutis; venis læte viridibus, fimbriis haud brevibus, nigris; venulis gradatis perpaucis; pedibus vireis, tarsis flavidis, unguiculis simplicibus fuscis.

Chrysopa gracilis, *Heyden, MSS. Schneid. Monogr. Chrys*, 723, pl. 9.

Germany.

9. CHRYSOPA STENOPTILA.

Pallide viridis, palpis fuscis, in clypei lateribus stria parva, et in genis ante oculos macula fusca; in fronte, ante antennarum basin macula dilute fusca, 2o antennarum articulo annulo semicirculari fuliginoso; pronoti lateribus pallide fuscis; alis hyalinis, longis, angustissimis, acutis, venis pallide viridibus; fimbriis modice longis, nigris; tarsorum unguiculis simplicibus.

Chrysopa stenoptila, *Schneid. Mon. Chrys.* 73, 4, pl. 10.

Silesia.

10. CHRYSOPA FLAVEOLA.

Flavida; antennarum articulo 1o longiore, incrassato, superne lineola nigra excellente, inde a 3o articulo fusca; prothorace antice angustato, lateribus subfuscis; ala inferiore superiori fere pari, omnibus angustis, acuminatis, earum venis flavidis, fimbriis admodum longis.

Chrysopa flaveola, *Mus. Berol. Schneid. Mon. Chrys.* 75, 5. pl. 11.

Java.

11. CHRYSOPA INVARIA.

Lutea, subtus testacea; antennæ testaceæ, subpubescentes; thorax viridi varius; pedes testacei; alæ limpidæ, sat breves, stigmate venisque viridibus.

Luteous: antennæ testaceous, minutely pubescent; first joint luteous: lobes of the thorax green: under side and legs pale testaceous: wings limpid, rather short; stigma greenish; veins pale green, much like those of *C. vulgaris*. Length of the body 4 lines; of the wings 12 lines.

a. Ceylon. Presented by R. Templeton, Esq.

Subsect. 2.

Alarum venæ, præcipue transversæ, ex parte aut totæ fusco vel nigro pictæ.

Group 1.

Caput et reliquum corpus quavis pictura destituta.

12. Chrysopa interrupta.

Flavido-viridis; alis angustis, paullo acuminatis, venis pallide flavidis; in ala superiore venulis gradatis parallelis et subcubitalibus totis, subcostalibus, 2i sectoris radii omnibus, 1i sectoris nonnullis, cubitalibus in initio et in fine, reliquis 1i sectoris venulis in initio tantum, nigris; in ala inferiore nonnullis venulis subcostalibus ex parte nigris; fimbriis costæ pallidis, densis, modice longis, venarum paullo longioribus, satis densis.

Chrysopa interrupta, *Schneid. Mon. Chrys.* 76, 6, pl. 12.

Pennsylvania.

13. Chrysopa divisa.

Flava, gracilis; abdomine pedibusque viridibus; capitis latera antica rufo varia; prothorax multo latior quam longior, antice paullo angustior; alæ limpidæ, breviusculæ, venis stigmateque viridibus, venulis plerumque fusco variis.

Pale yellow, slender: head on each side pale reddish towards the mouth, and with a pale reddish mark by the base of the antennæ: antennæ pale yellow: prothorax a little narrower in front, very much broader than long, slightly luteous on each side: abdomen and legs pale green: wings limpid, rather short; veins pale green; subcostal, subcubital and marginal veinlets, veinlets of the second sector, and the second series of gradate veinlets partly brownish; costal areolet less than one-third of the size of the adjoining subcostal areolet; stigma pale green. Length of the body 4 lines; of the wings 10 lines.

a. Brazil. Presented by J. P. G. Smith, Esq.

14. Chrysopa attenuata.

Flava, longa, gracillima; capitis latera antica rufa; palpi rufo varii; prothorax sublinearis, multo longior quam latior, lateribus anticis rufescentibus; alæ limpidæ, venis stigmateque viridibus, venulis plerumque obscurioribus.

Yellow, long, very slender: head red on each side towards the mouth: palpi with slight reddish marks: antennæ yellow: prothorax almost linear, very much longer than broad, with a slight transverse ridge on the disk, and with a reddish mark on each side in front: abdomen very long and slender: legs pale yellow: wings limpid, of moderate size; veins pale green; subcostal and radial veinlets, veinlets of the second sector, the two series of gradate veinlets and some of the subcubital veinlets partly or wholly darker green; cubital areolet much less than half the size of the adjoining subcubital areolet; stigma pale green, very indistinct. Length of the body 4 lines; of the wings 10 lines.

a, b. St. John's Bluff, East Florida. Presented by E. Doubleday, Esq.

15. Chrysopa thoracica.

Viridis, flavo vittata, sat robusta; caput flavum; antennæ testaceæ, validæ; prothorax multo latior quam longior; alæ limpidæ, parvulæ, venis stigmateque viridibus, venulis nonnullis nigricantibus.

Green, rather stout: head yellow: antennæ testaceous, rather thick, yellow towards the base, very much shorter than the wings: prothorax with a broad yellow dorsal stripe, slightly angular on each side in front, very much broader than long: scutellum yellow: abdomen with a slender yellow dorsal stripe: legs pale green: wings limpid, rather small; veins pale green; subcostal veinlets, veinlets of the second sector and some of the subcostal veinlets partly blackish; costal areolet not more than one-third of the size of the adjoining subcostal areolet; stigma pale green. Length of the body 3½ lines; of the wings 12 lines.

a. St. Domingo. Presented by M. A. Pierret.

16. Chrysopa alba.

Albido-viridis; vertice valde fornicato; oculis animali vivo obscure æneo micantibus; alis paullo acutis, venis pallide albido-viridibus; fimbriis costæ densis longis; alæ superioris venulis subcostalibus, venulis gradatis parallelis, cubitalibus et subcubitalibus totis, 2i sectoris radii venulis, primisque 1i sectoris, in initio et in fine, postcostalibus et marginalibus, simplicibus in fine, nigris; alæ inferioris; venulis subcostalibus et 1a venularum gradatarum serie totis, 2i sectoris venulis in initio et fine, 1i sectoris in initio nigris.

Chrysopa alba, *Steph. Ill. Brit. Ent. Mand.* vi. 204, 9. *Evans, Mon. Chrys. Trans. Ent. Soc. Lond.* v. 4, 78, pl. 9, f. 1. *Schneid. Mon. Chrys.* 77, 7.

Hemerobius albus, *Linn. Syst. Nat. Ed.* 12, 1, 2, 911, 3. *Faun. Suec. Ed.* 2, 382, 1506. *Fabr. Ent. Syst.* ii. 82, 4. *Scop. Ent. Carn.* 709 ?

Chrysopa ciliata, *Wesm. Bull. Acad. Brux.* viii. 1, 212, 8.

Var. ? Chrysopa microcephala, *Brauer, Beschr. Osterreich. Arten, Chrys. Sp.* 4.

a—c. England.

d. Wales. From Mr Foxcroft's collection.

17. CHRYSOPA REPLETA.

Testacea ; antennæ apice paullo obscuriores, alis breviores ; prothorax paullo longior quam latior, antice vix angustior ; abdomen maculis dorsalibus fuscis, subtus albidum ; pedes albidi ; alæ limpidæ, venis flavis distinctis, venulis transversis nonnullis fusco variis.

Testaceous: antennæ a little darker towards the tips, minutely pubescent, shorter than the wings: prothorax a little longer than broad, hardly narrower in front: abdomen with a brown spot on the hind border of each segment; under side and legs whitish: wings limpid; veins pale yellow, bristly, strongly marked; costal region moderately broad; both series of gradate veinlets regular and very distinct; cubital areolet not one-third of the size of the adjoining subcubital areolet; transverse veinlets of the fore-wings and of some few of the hind-wings partly tinged with brown; stigma yellowish. Length of the body 3½ lines; of the wings 11 lines.

a. Georgia. From Mr. Abbot's collection.

Group 2.

Caput et prothorax picturis rubris vel nigris insignia.

Sub-group 1.

Caput picturis rubris insigne. Prothoracis margines laterales fusco colore cinctæ.

18. CHRYSOPA RUFILABRIS.

Vireo-flava ; macula utrinque ante oculos, striga in frontis clypei, labrique lateribus et puncto in occipite utrinque juxta oculos sanguineis ; pronoti marginibus lateralibus fuscis ; alis angustis, venis subviridibus ; in ala superiore venulis gradatis totis, venulis subcostalibus in initio et fine, venulis 2i sectoris radii in initio tantum fuliginosis ; abdomine superne ab utraque parte vitta angusta fulva cincto.

Chrysopa rufilabris, *Burm. Hand. Ent.* ii. 2, 979, 2. *Schneid. Mon. Chrys.* 79, 8, pl. 14.

United States ; Mexico.

19. CHRYSOPA COLLARIS.

Vireo-flavida ; stria rubra utrinque in genis ante oculos, alia in margine laterali clypei et labri, puncto rubro utrinque in occipite juxta oculos ; prothorace paullo latiore quam longiore, in lateribus læte ferruginco ; alæ superioris venulis gradatis et subcubitalibus totis, subcostalibus in initio et fine, venulis 2i sectoris radii in initio, et nonnullis 1i sectoris et cubitalibus ex parte nigris ; alæ inferioris venulis subcostalibus tantum nigris.

Chrysopa collaris, *Schneid. Mon. Chrys.* 80, 9, pl. 15.

Isle St. Thomas.

20. CHRYSOPA HYBRIDA.

Vireo-flava ; palpis fuscis ; prothorace in anticam partem perspicue angustato, marginibus lateralibus rubescentibus ; alarum venis pallide flavo-vireis ; in ala superiore venulis subcostalibus, nonnullis 2i et 1i sectoris radii, venulis gradatis, cubitalibus, subcubitalibus, postcostalibus, uti marginalibus simplicibus totis, reliquis ex parte tantum nigris ; in ala inferiore venulis subcostalibus, gradatis et nonnullis 2i sectoris radii nigris ; abdomine superne duabus lineis longitudinalibus aurantiacis ; apicibus tarsorum unguiculorum vix dilatationem superemi-nentibus.

Chrysopa hybrida, *Schneid. Mon. Chrys.* 81, 10, pl. 16.
Hemerobius hybridus, *Ramb. Hist. Nat. Ins. Neur.* 426, 7.

a. Brazil.

Sub-group 2.

Caput et prothorax punctis aut maculis rubris insignita.

21. CHRYSOPA BRASILIENSIS.

Pallide vireo-flava; prothorace fere dimidio longiore quam latiore, utrinque in margine laterali punctis duobus aurantiacis; venulis subcostalibus, venulis 2i sectoris radii, venulis gradatis, quarum duæ series valde distantes, venulis cubitalibus, subcubitalibus, postcostalibus totis, plurimis 1i sectoris radii, uti venulis marginalibus ex parte tantum nigris; alæ inferioris venulis gradatis tantum nigris.

Chrysopa Brasiliensis, *Schneid. Mon. Chrys.* 83, 11, pl. 17.

22. CHRYSOPA QUADRIPUNCTATA.

Vireo-flava; vertice valde fornicato; ultimo palporum articulo in apice fusco; stria in genis ante oculos et in clypei lateralibus, punctoque oblongo utrinque in occipite juxta oculos aurantiacis; prothorace fere tertia parte longiore quam latiore; juxta pronoti sulcum longitudinalem utrinque maculis parvis duabus, abdomineque superne lineis duabus longitudinalibus, aurantiacis; alæ superioris venulis subcostalibus, 2i sectoris, venis gradatis, quarum duæ series sibi appropinquatæ, et subcubitalibus totis, reliquarum plerisque ex parte nigris; in ala inferiore venulis subcostalibus et gradatis totis, utriusque sectoris radii et marginalibus furcatis ex parte nigris.

Chrysopa quadripunctata, *Burm. Handb. Ent.* ii. 2, 980, 5. *Schneid. Mon. Chrys.* 84, 12, pl. 18.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

b. Georgia. From Mr. Abbot's collection.

23. CHRYSOPA INFECTA.

Lutea, antennarum basi, capite, corporeque toto rufo infectis; alæ hyalinæ, venis longitudinalibus pallidis, cæteris fuscis.

Chrysopa infecta, *Newm. Ent. Mag.* v. 400.

a. Malabar. Presented by the Entomological Club.

Sub-group 3.

Prothorax, et interdum thorax totus vittis rubris marginalibus.

24. Chrysopa cincta.

Virco-flava ; palpis fuscis, articulis 1o *et* 2o *antennarum longarum superne, et occipite utrinque juxta oculos linea saturate sanguinea insignibus; prothoracis marginibus lateralibus anguste colore obscure sanguineo cinctis; alis angustis, superiorum plerisque tantum venulis subcostalibus, venulis* 2*i sectoris radii, venulis parallelis gradatis et subcubitalibus totis, nonnullis aliis venulis ex parte nigris.*

Chrysopa cincta, *Schneid. Mon. Chrys.* 86, 13, pl. 19.

a. Brazil. Presented by Sir G. Stewart.
b. Pará. From Mr. Badgerley's collection.

25. Chrysopa circumfusa.

Virco-flavida ; palpis fuliginosis, vertice valde fornicato ; linea superne in antennæ articulo 1o, *stria in genis ante oculos, in clypei lateribus, inter oculos et antennarum basin conspicua, punctoque oblongo utrinque in occipite proxime ad oculos, sanguineis; prothorace paullo longiore quam latiore, marginibus lateralibus sanguineo cinctis ; alis albidis, superioris venulis subcostalibus fuscis, venulis transversis fere omnibus macula nebulosa fusca tinctis.*

Chrysopa circumfusa, *Burm. Handb. Ent.* ii. 2, 980, 3. *Schneid. Mon. Chrys.* 87, 14, pl. 20.

Brazil.

26. Chrysopa cruentata.

Flavida ; antennarum articulo 1o, *stria ingenis ante oculos et in clypei lateribus, pronoti marginibus lateralibus limbo bilobo, maculis duabus in mesonoto et utrinque ad alæ superioris basin, abdomineque in segmentis tribus prioribus superne lineis duabus vix perspicuis, in* 6o, 7o, 8o *duabus perspicuis, sanguineis ; alis latis ; costæ fimbriis longis ; pterostigmate fuscescente, antice macula fusca ; alæ superioris venulis radialibus, gradatis parallelis, cubitalibus, subcubitalibus, postcostalibus, et omnibus marginalibus totis, reliquis in initio et fine nigris ; initio* 2*i sectoris radii nigro, macula fusca circumscripto ; alæ inferioris* 2o *radii sectore ex parte nigro.*

Chrysopa cruentata, *Schneid. Mon. Chrys.* 89, 15, pl. 21.
Brazil.

27. CHRYSOPA COSTALIS.

Flava; macula in genis ante oculos, stria in clypei lateribus, et punctis duobus in occipite juxta oculos, sanguineis; pronoto limbo laterali obscure rufo paullo sinuato; meso- et metathoracis lateribus vitta latissima pallide rufa, cæruleo-pruinosa; ala superiore lata, area costali latissima; ala inferiore angusta, acuta; fimbriis costæ longissimis; venulis alæ superioris gradatis totis nigris, 1a earum serie maculis fuscis circumscripta; nebula cinerea in utraque ala juxta marginem posteriorem dilatata; abdomine lineis duabus longitudinalibus fuscis.

Chrysopa costalis, *Schneid. Mon. Chrys.* 90. 16, pl. 22.
America.

Sub-group 4.

Caput et interdum thorax punctis, lineis vel vittis aut fuscis aut fuliginosis aut nigris insignita.

* Palpi pallidi vel (interdum ex parte) fusci.

28. CHRYSOPA PUSILLA.

Vireo-flava; vertice valde fornicato; articulis duobus prioribus antennarum longarum subtus puncto fusco insignibus; thorace toto in lateribus vitta obscure rufa cincto; fimbriis costæ longis; alæ superioris venis omnibus transversis (nonnullis marginalibus furcatis exceptis) nigris; alæ inferioris venulis subcostalibus tantum nigris.

Chrysopa pusilla, *Schneid. Mon. Chrys.* 92, 17, pl. 23.

29. CHRYSOPA BREVICOLLIS.

Vireo-flava; vertice modice fornicato; palpis fuscis; antennis incrassatis; stria fusca in genis ante oculos; prothorace latiore quam longiore, in anticum angustato, marginibus lateralibus fuscis; alis longis, fimbriis costæ densis, admodum brevibus, pallidis; venularum subcostalium parte apicibus nigris.

Chrysopa brevicollis, *Schneid. Mon. Chrys.* 93, 18, pl. 24.
Hemerobius brevicollis, *Ramb. Hist. Nat. Ins. Neur.* 427, 9.
Isle of France.

30. Chrysopa tenella.

Pallide virea; vitta media albida in thoracis abdominisque dorso; vertice valde fornicato; antennarum articulo 1o incrassato; palpis læte fuscis; macula in genis ante oculos et stria in clypei lateribus fuscis; venis pallide vireis; costæ fimbriis brevibus pallidis; alæ superioris venulis transversis plerisque in initio et fine, venulis subcubitalibus, gradatis et alæ inferioribus venulis subcostalibus totis nigris.

Chrysopa tenella, *Schneid. Mon. Chrys.* 94, 19, pl. 25.
Silesia.

31. Chrysopa Chloris.

Pallide viridis; palpis in apice fuliginosis; lineis duabus parallelis fuliginosis utrinque in capitis lateribus ante oculos; alis paullo dilatatis, venis pallide viridibus; fimbriis costæ longis densis; in mare ala superiore venulis gradatis, 1a cubitali et subcubitalibus, totis, venulis reliquis ex parte nigris; in ala inferiore venulis subcostalibus et venulis sectoris 2i in initio et fine nigris; in fœmina venis omnibus unicoloribus.

Chrysopa Chloris, *Mus. Berol.*; *Schneid. Mon. Chrys.* 95, 20, pl. 26.
Cape.

32. Chrysopa viridana.

Læte viridis; capite et vitta media in thorace et abdomine flavidis; in frontis et clypei lateribus utrinque stria fuliginosa; antennarum articulo 1o incrassato; venis et fimbriis modice longis, alæ superioris venulis subcostalibus viridibus, radialibus, gradatis, subcubitalibus et postcostalibus totis, reliquis ex parte nigris; alæ inferioris venulis subcostalibus et gradatis seriei 2æ totis, venulis sectoris 2i in initio nigris.

Chrysopa viridana, *Schneid. Ent. Zeit. Stett.* vi. 1845, 345, 35. *Mon. Chrys.* 97, 21, pl. 27.
Naples.

33. Chrysopa flavifrons.

C. viridanæ *affinis esse videtur*;—*a qua vero maculis duabus rubris in pronoto conspicuis, formam litteræ S imitantibus distinguitur.*

Chrysopa flavifrons, *Brauer, Beschreibung und Beobachtung der Osterreichischen Arten der Gattung Chrysopa, Sp.* 3.

Austria.

34. Chrysopa nigricostata.

Læte viridis; capite et vitta longitudinali in thorace et abdomine parum distincta, pallide vireo-flavidis; puncto magno utrinque ante oculos, et lineola in clypei lateribus nigris; venis læte viridibus; fimbriis brevibus, sparsis, nigris; alæ superioris venulis subcostalibus, radialibus, venulis sectoris 2i,—gradatis numerosis illis, non parallelis, subcubitalibus, postcostalibus, marginalibus simplicibus,—totis, reliquis ex parte nigris; alæ inferioris venulis subcostalibus, radialibus, et sectoris 2i in initio, nigris.

Chrysopa nigricostata, *Brauer, Beschr. Osterreich. Arten, Chrys. Sp.* 6, *Larva*, pl. 2, f. 9.

Chrysopa Heydeneii, *Schneid. Mon. Chrys.* 98, 22, pl. 28.

Germany.

a, *b*. ——? From Mr. Children's collection.

35. Chrysopa pallida.

Læte viridis; thorace et abdomine vitta laterali fusca; capitis flavovirei vertice valde fornicato, macula fusca utrinque post antennas; his brevibus, articulo 1o *crasso; pronoto latiore quam longiore; alis angustis, acutis; fimbriis brevibus paucis; et alæ superioris radii sectore* 1o, *vena subcubitali et postcosta, et inferioris costa,* 1o *et dimidio* 2o *radii sectore, venulisqae fere omnibus transversis, nigris.*

Chrysopa pallida, *Schneid. Uebersicht d. Arb. d. Vaterl. Gesellsch. J.* 1845, 49. *Mon. Chrys.* 99, 23, pl. 29.

Silesia; Bohemia.

36. Chrysopa septempunctata.

Prasina; palpis fulvis; puncto inter antennas, alio utrinque ante antennas, alio utrinque ante oculos in frontis angulis angustis, et stria utrinque in clypei lateribus,—nigris; pronoto in angulis anticis punctis nigris insigni; venis læte viridibus; alæ superioris venulis subcostalibus, nonnullis et subcostalibus totis, nonnullis aliis ex parte, inferioris venulis subcostalibus et ultimis sectoris 2i nigris.

Chrysopa septempunctata, *Wesm. Bull. Acad. Brux.* viii. 1, 210, 5. *Schneid. Mon. Chrys.* 101, 24, pl. 30.

Chrysopa nobilis, *Brauer, Beschr. Osterreich. Arten, Chrys. Sp.* 9. *Larva*, pl. 2, f. 13.

Europe.

a. England. Presented by J. Taylor, Esq.
b—c. ——— ? From Mr. Children's collection.

37. Chrysopa Mauriciana.

Hemorobius Mauricianus, *Ramb. Hist. Nat. Ins. Neur.* 425, 5.
Chrysopa septempunctata, var.? *Schneid. Mon. Chrysop.* 101.

Mauritius.

38. Chrysopa bipunctata.

Pallide ochracea; palpis unicoloribus flavis; stria arcuata ante antennas, puncto magno inter eas collocato, stria in genis ante oculos, et in clypei lateribus,—nigris; prothorace latiore quam longiore; venis flavidis; fimbriis brevibus, densis, flavis; alæ superioris venulis subcostalibus, tribus 1i sectoris prioribus, venularum gradatarum serie 1a, et subcubitalibus, totis,—nonnullis aliis venulis ex parte,—nigris; alæ inferioris venulis subcostalibus totis, sectoris 2i ex parte—nigris.

Chrysopa bipunctata, *Burm. Handb. Ent.* ii. 2, 982, 15. *Schneid. Mon. Chrys.* 103, 25, pl. 31.

Japan.

39. Chrysopa pallens.

Vireo-flava; antennæ articulo 1o brevi; puncto inter antennas alio utrinque ante oculos, alio utrinque in clypei lateribus,—nigris; prothorace paulo latiore quam longiore, lateribus obscure fulvis; venis flavidis, fimbriis modice longis; alæ superioris venulis subcostalibus fere omnibus, uti subcubitalibus totis, sectoris 2i et postcostalibus in initio nigris; alæ inferioris venulis subcostalibus totis, sectoris 2i maximam partem, nigris.

Chrysopa pallens, *Schneid. Mon. Chrys.* 104, 26, pl. 32.
Hemorobius pallens, *Ramb. Hist. Nat. Ins. Neur.* 425, 3.

Malaga.

40. Chrysopa intermedia.

Flavido-viridis; caput flavidum, macula fusca in genis proxime ante oculos, antennis plus dimidia parte longioribus quam alis,—articulo 1o incrassato; prothorax valde in anticum angustato, marginibus lateralibus fuscis; alarum venæ pallide vireæ, fimbriis densis admodum longis; pterostigmate ab initio macula fusca; alæ superioris venulis gradatis, cubitalibus et marginalibus furcatis, totis,—reliquis ex parte,—alæ inferioris venulis subcostalibus et sectoris 2i parte nigris.

Chrysopa intermedia, *Schneid. Mon. Chrys.* 106, 27, pl. 33.

a. Santarem, Brazil. From Mr. Stevens' collection.
b. ——? From Mr. Children's collection.

Brazil.

41. Chrysopa internata.

Testacea; antennæ gracillimæ, alis multo longiores; prothorax pallidus, conicus, flavo bivittatus; abdomen supra ferrugineum, apice flavo vittatum; pedes albidi; alæ limpidæ, latæ, purpureo-nitentes, stigmate fusco.

Nearly allied to *C. intermedia*, from which it differs in the pale sides of the prothorax and in the pale gradate and marginal areolets. Testaceous: antennæ pale testaceous, darker at the base, very slender, much longer than the wings: prothorax pale testaceous or

whitish, conical, with a yellow stripe on each side, a little longer than broad: abdomen ferruginous above, with a bright yellow band towards the tip: legs whitish: wings limpid, rather broad, adorned with bright purple reflections; veins pale green, with very few black bands; second series of the gradate veinlets mostly black; marginal region broad, especially towards the base; stigma brown, short.

Var. β. Antennæ reddish at the base: hind border of the prothorax luteous: disk of the mesothorax and of the metathorax ferruginous, with six yellow dots: abdomen above and stigma paler. Length of the body 6 lines; of the wings 20 lines.

a. Brazil.
b. ———? From Mr. Children's collection.

42. CHRYSOPA NIGROVARIA.

Flava; caput fusco varium; thorax nonnunquam nigro varius; antennæ supra basi nigricantes; abdomen nigro vittatum; alæ limpidæ, venulis transversis nigro variis, stigmate fusco.

Pale yellow: head with a broad brown band beneath the antennæ, and with a slender undulating brown band on the front: antennæ blackish above towards the base: prothorax broader than long, a little narrower in front, with a black stripe on each side: segments of the mesothorax and of the metathorax with black borders: abdomen with a black dorsal stripe: wings limpid; costal region moderately broad; two complete series of gradate veinlets; cubital areolet full half the size of the adjoining subcubital areolet; veinlets of the cubitus and of the two sectors towards the base and gradate veinlets partly black, hind-wing veins of one colour; stigma brown. Length of the body 3½ lines; of the wings 15 lines.

Var. β. Head with only a brown dot in front of the antennæ; brown band on the front very narrow: prothorax with a red stripe on each side: thorax without black marks: abdomen with a blackish stripe on each side, but without a dorsal stripe.

a, *b*. Venezuela. From Mr. Dyson's collection.

43. Chrysopa Ramburi.

Flavido-viridis; palpis acutis; antennis longioribus quam alis; articulo 1o incrassato; lineolis duabus ante antennas, et punctis duobus in vertice nigris; prothorace paullo latiore quam longiore; pronoto medio linea transversa interrupta, in finibus paullo curvata,—postico lineolis duabus, punctoque in angulis anticis,—nigris; fimbriis costæ brevibus; alæ superioris venulis multis transversis,—inferioris venulis subcostalibus, fuliginosis; unguiculis simplicibus.

Hemerobius affinis, *Ramb. Hist. Nat. Ins. Neur.* 426, 6.
Chrysopa Ramburi, *Schneid. Mon. Chrys.* 107, 28, pl. 34.

a. Van Dieman's Land. Presented by the Rev. T. Ewing.

44. Chrysopa signata.

Vireo-flava; antennæ articulis duobus prioribus in exteriore et interiore parte lineolâ fuliginosa insignibus; puncto fuliginoso inter antennas et utrinque in genis ante oculos; alis perangustis,—superiorum venulis transversis fere omnibus,—inferiorum pluribus nigris.

Chrysopa signata, *Schneid. Mon. Chrys.* 109, 29, pl. 35.

a. Swan River. Presented by Sir John Richardson.
b. Van Dieman's Land. From Mr. A. J. Smith's collection.

45. Chrysopa innotata.

Viridis, flavo vittata; antennæ testaceæ, prothorax latior quam longior, antice paullo angustior; alæ limpidæ, breviusculæ, venis stigmateque viridibus, venulis plerumque nigris.

Green, with a yellow dorsal stripe extending from the head to the tip of the abdomen: head luteous on each side towards the mouth: antennæ pale testaceous; first joint pale green; second luteous: prothorax broader than long, a little narrower in front: legs pale green: wings limpid, rather short; veins pale green; transverse veinlets mostly black; cubital areolet about one-third of the size of the adjoining subcubital areolet; stigma pale green, very narrow and indistinct. Length of the body 4 lines; of the wings 12 lines.

a. Australia. Voyage of H.M.S. Rattlesnake.

46. Chrysopa transversa.

Flava; caput antice rufo varium; palpi nigro varii; prothorax vix latior quam longior, lateribus rufescentibus; alæ limpidæ, venis stigmatique viridibus, venulis transversis nigris.

Yellow: head with a red spot on each side below the base of the antenna; sides of the face red: palpi partly blackish: antennæ yellowish, pubescent, paler at the base, shorter than the wings: prothorax slightly reddish on each side, hardly narrower in front, very little broader than long: legs pale green: wings limpid, rather short; veins pale green; transverse veinlets nearly all black, rather few; areolets less numerous than usual; cubital areolet less than half the size of the adjoining subcubital areolet; stigma pale green. Length of the body 3—4 lines; of the wings 9—11 lines.

a—*c*. Jamaica. From Mr. Gosse's collection.

* * Palpi fuliginosi, aut unicolores, aut pallide annulati.

47. Chrysopa prasina.

Læte viridis; palpis fuliginosis; articulis binis penultimis in apice pallide annulatis; puncto inter antennas, stria utrinque in genis ante oculos et in clypei lateribus,—nigris; pronoto medio punctis duobus nigris lineisque duabus posticis longitudinalibus fuscis, in lateribus utrinque punctis binis nigris; mesothorace duobus et alarum costa ad basin puncto singulo,—nigris; alæ superioris venulis transversis omnibus (marginalibus furcatis exceptis) totis nigris.

Chrysopa prasina, *Burm. Handb. Ent.* ii. 2, 981, 14. *Schneid. Mon. Chrys.* 110, 30, pl. 36.
Hemerobius prasinus, *Ramb. Hist. Nat. Ins. Neur.* 424, 2.
Germany.

48. Chrysopa aspersa.

Pallide viridis; palpis fuliginosis,—articulis binis penultimis in apice fulvo annulatis, puncto in capite inter antennas, et stria, utrinque in genis ante oculos et in clypei lateribus—nigris; in pronoto medio punctis duobus,—in marginibus utrinque binis vel ternis,—in mesothorace duobus et in alarum costa ad basin singulo, puncto—nigris; venulis transversis plerisque in utroque apice,—venulis gradatis plerumque totis nigris.

Chrysopa aspersa, *Wesm. Bull. Acad. Brux.* viii. 1, 210, 5. *Schneid. Mon. Chrys.* 112, 31, pl. 37.
Chrysopa ventralis, *Curt. Brit. Ent.* xi. 520, 36. *Steph. Ill. Brit. Ent. Mand.* vi. 103, 8. *Evans, Mon. Chrys. Trans. Ent. Soc. Lond.* v. 4, 78, pl. 10, f. 6.
Chrysopa cærulea, *Brauer, Beschr. Osterreich. Arten, Chrys. Sp.* 7. Larva, pl. 2, f. 18.

a. Nice. From Dr. Leach's collection.
b. ——— ? From Mr. Children's collection.

49. Chrysopa Zelleri.

Pallide viridis; palpis fuliginosis; articulo 3o et 4o in apice pallide annulato; antennæ articulo 1o in externa parte linea nigra insigni; inter antennas uno, in vertice punctis duobus, —stria in genis proxime ante oculos et in clypei lateribus,— punctis duobus in medio mesothorace et metathorace,—puncto singulo in alarum costa ad basin,—nigris; alæ superioris venulis omnibus transversis, inferioris venulis subcostalibus, radialibus, sectoris 2i, gradatis et subcubitalibus nigris.

Chrysopa Zelleri, *Schneid. Mon. Chrys.* 114, 32, pl. 38.
Italy; Sicily.

50. Chrysopa clathrata.

Albido-virea, capite pallidiore; palpis fuliginosis; frontis et clypei lateribus punctoque inter antennas rufescentibus vel ferrugineis; stria fusca in genis ante oculos; utrinque juxta verticem et in occipite puncto fusco; prothoracis abdominisque lateribus vitta,—mesonoto, scapulis et metanoto utrinque macula—fuscis; venis albido-viridibus, costa ad basin puncto fusco; in alis superioribus et inferioribus venulis subcostalibus, gradatis et subcubitalibus totis,—reliquis in utroque apice fuscis; unguiculis apice valde curvato et brevi angustaque dilatione ad basin insignibus.

Chrysopa clathrata, *Schneid. Ent. Zeit. Stett.* vi. 1845, 345, 39; *Mon. Chrys.* 116, 33, pl. 39.

Italy; Sicily.

Sect. 2.

Antennarum articulus 2us fusco aut nigro colore cinctus.

Subsect 1.

Alarum venæ omnis unicolores. Caput punctis nigris insigne.

51. Chrysopa abbreviata.

Læte prasina; palpis fuliginosis, articulo 3o et 4o pallide annulatis; antennæ articulo 1o incrassato, puncto nigro in interna parte notato; puncto ante antennas, alio utrinque in genis, in clypei lateribus et utrinque in occipite,—punctis duobus in vertice, nigris; stria parva arcuata ante utriusque antennæ basin,—stria magna arcuata pone in vertice, punctis duobus in prothoracis lateribus,—linea transversa, media interrupta, in ejus media parte, punctisque nonnullis in meso- et metathorace, —nigris; alis brevibus, latis, in apice rotundatis; fimbriis longis, nigris; unguiculis simplicibus.

Chrysopa abbreviata, *Curt. Brit. Ent.* xi. 520, 3c. *Steph. Ill. Brit. Ent. Mand.* vi. 103, 5. *Wesm. Bull. Acad. Brux.* viii. 1, 209, 3. *Evans, Mon. Chrys. Trans. Ent. Soc. Lond.* v. 4, 78, pl. 9, f. 7. *Schneid. Mon. Chrys.* 119, 35, pl. 41.

Chrysopa immaculata, *Steph. Ill. Brit. Ent. Mand.* vi. 103, 6. *Evans, Mon. Chrys. Trans. Ent. Soc. Lond.* v. 4, 78, pl. 10, f. 5.
Hemerobius chlorophanus, *Ratzeburg, Forst. Ins.* iii. 248.
Chrysopa phyllochroma, *Wesm. Bull. Acad. Brux.* viii. 209, 4.
Chrysopa pusilla, *Brauer, Beschr. Osterreich. Arten, Chrys. Sp.* 11.
Var.? Chrysopa tenella, *Brauer, Beschr. Osterreich. Arten, Chrys. Sp.* 2.
Var.? Chrysopa decora, *Evans, Trans. Ent. Soc. Lond.* v. 78, pl. 9, f. 6. *Caput roseum, antennæ et pedes pallida; alæ rufescentes, breves, rotundatæ, stigmate roseo.*

a. ——— ? From Mr. Children's collection.

Subsect. 2.

Alarum venæ transversæ ex parte fuscæ vel nigræ; caput et plerumque etiam thorax maculis rubris vel nigris insignes.

Group 1.

Alæ non maculatæ.

Sub-group 1.

Unguiculi in basi dilatati.

52. Chrysopa formosa.

Læte prasina; palpis fuliginosis, articulo 3o et 4o in apice flavis; antennis corpore longioribus, articulo 2o anguste fuliginose annulato; puncto nigro inter antennas, alio utrinque in genis, —stria parva in clypei lateribus, et stria arcuata utrinque ante antennarum basin; punctis duobus in vertice,—singulo in occipite juxta oculos, et binis vel ternis in pronoti lateribus; alis subacutis, superiorum venulis subcostalibus, nonnullis sectoris 1i, et subcubitalibus—totis,—venulis 2i et reliquis sectoris 1i ex parte—nigris; fimbriis costæ brevibus, nigris.

Chrysopa formosa, *Brauer, Beschr. Osterreich. Arten, Chrys. Sp.* 10.
Chrysopa Burmeisteri, *Schneid. Mon. Chrys.* 123, 36, pl. 42.
Europe.

53. Chrysopa nigricornis.

Flavido-viridis; palpis pallidis, articulo 3o macula fusca, ultimo in apice fusco; antennis a articulo 3o usque ad 3am longitudinis partem nigris, deinde fulvis, 2o fuliginose annulato; alis angustis; venulis gradatis subparallelis in media parte, reliquarum venularum transversarum nonnullis, ex parte nigris; fimbriis admodum longis, densis, pallidis.

Chrysopa nigricornis, *Burm. Handb. Ent.* ii. 2, 980, 6. *Schneid. Mon. Chrys.* 126, 37, pl. 43.

Carolina.

54. Chrysopa latipennis.

Læte viridis; alis brevibus latis, in apice rotundatis; venis viridibus,—fimbriis costæ et venarum densis longis nigris; alæ superioris venulis gradatis et duabus subcubitalibus totis,—venulis subcostalibus in utroque apice, et venulis sectoris 1i et 2i ab initio nigris; alæ inferioris subcostalibus totis, sectoris 2i in initio nigris.

Chrysopa latipennis, *Schneid. Mon. Chrys.* 118, 34, pl. 40.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

North America.

55. Chrysopa chlorophana.

Læte viridis; capite flavido; labro antico et clypeo utrinque sanguineo; palpis pallidis, fuliginose annulatis; antennarum articulo 1o antice macula sanguinea; in fronte, ante et circa antennarum basin, uti inter eas, stria lata fuliginosa; in medio vertice macula bifida,—et in occipite juxta oculos puncto,—sanguineis; alis brevibus, latis, rotundatis; superiorum venulis subcostalibus in utroque apice, inferiorum totis—nigris; fimbriis longis, densis.

Chrysopa chlorophana, *Burm. Handb. Ent.* ii. 2, 979, 1. *Schneid. Mon. Chrys.* 127, 32, pl. 44.

a. La Chine, near Montreal. Presented by Dr. Barnston.
b. Newfoundland. Presented by W. C. St. John, Esq.
c—e. Nova Scotia. From Lieut. Redman's collection.

f. North America. Presented by the Entomological Club.
g. Trenton Falls, New York. Presented by E. Doubleday, Esq.

56. Chrysopa oculata.

Flavido-virea; palpis fuliginosis, pallide annulatis; antennarum articulo 2o nigro; stria in clypei lateribus,—altera arcuata ante antennarum basin, earum basin ipsam et spatium inter antennas cingente,—quatuor punctis magnis in vertice, et singulo puncto utrinque in occipite,—tribus punctis in prothoracis lateribus, duobus ante mediam illius partem,—et linea media transversa interrupta,—fuliginosis; alis latis, superiorum venulis gradatis et subcubitalibus totis,—subcostalibus, prioribus sectoris 1i, et illis sectoris 2i ex parte—nigris; fimbriis longis.

Chrysopo oculata, *Say, Journ. Acad. Nat. Sci. Phil.* viii. 45.
Chrysopa euryptera, *Burm. Handb. Ent.* ii. 2, 980, 7. *Schneid. Mon. Chrys.* 129, 39, pl. 45.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

Sub-group 2.

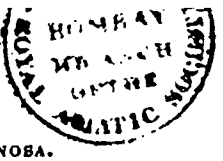
Ungues simplices.

57. Chrysopa Genei.

Vireo-flava; thorace et abdomine in lateribus fusco cinctis; palpis fuscis, subacutis; annulo in antennæ articulo 2o, stria subtili in clypei lateribus et in genis,—stria arcuata ante cujusque antennæ basin, et stria recta inter ipsas,—duabus lineolis parallelis in vertice, et duobus punctis juxta oculos,—puncto singulo utrinque in occipite—fuscis; alis angustis, superiorum venulis transversis omnibus,—inferiorum plerisque fuliginosis; fimbriis longis, pallidis.

Chrysopa Genei, *Schneid. Mon. Chrys.* 130, 40, pl. 46.
Hemerobius Genei, *Ramb. Hist. Nat. Ins. Neur.* 430, 18.

Sardinia; Naples; Sicily.



58. Chrysopa venosa.

Flava; meso- et metathorace in lateribus, et abdomine in segmentorum marginibus posticis late fusco cinctis; palpis fuscis; labro antice duobus, clypeo postice tribus punctis,—fronte maculis duabus trigonis, fere confluentibus, et antice punctis duobus,—stria in genis,—lineolis duabus longitudinalibus in vertice, et picturis in prothorace—fuscis; alis angustis; venulis transversis omnibus totis vel ex parte nigris; fimbriis modice longis, fuscis.

Chrysopa venosa, *Schneid. Mon. Chrys.* 132, 41, pl. 47.
Hemerobius venosus, *Ramb. Faun. Ent. de l'Andal.* ii. pl. 9, f. 7; *Hist. Nat. Ins. Neur.* 430, 17.

Granada.

Group 2.

Alæ maculatæ.

59. Chrysopa elegans.

Nigro flavoque colore varia; capite, palpis, antennarum articulis duobus prioribus, meso- et metathorace superne, abdominisque segmentis nonnullis ex parte,—nigris; labro, clypei lateribus, vertice partim, occipite, prothorace et abdominis reliqua parte, —flavis; alis latis, in superiorum et inferiorum, apice, et in superiorum areæ costalis parte 3a macula majore, sub hac minore annuliformi, et parva in margine interiore,—fuscis; fimbriis longis pallidis.

Chrysopa elegans, *Schneid. Mon. Chrys.* 134, 42, pl. 48.
Hemerobius elegans, *Guér. Icon. Règne Anim. Ins. Texte*, 388.

Brazil.

Subsect. 3.

Alarum venæ transversæ omnes et totæ nigræ: corpus punctis et maculis fuliginosis aut nigris insigne.

Group 1.

Venæ longitudinales nullæ nigræ.

60. Chrysopa perla.

Æruginosa; capite pallidiore; palpis fuliginosis, penultimis binis articulis in apice pallidis; labri margine antico, macula in clypei angulis anticis, alia in genis,—puncto in frontis angulis anticis, antennarum articulo 2o,—annulo earum basin cingente, annulo in vertice et occipite toto,—maculis in promeso- et metathorace,—nigris; alis latis; fimbriis longis, nigris; abdomine subtus nigro, maris superne viridi, fœminæ nigro maculato.

Chrysopa perla, *Schneid. Mon. Chrys.* 136, 43, pl. 49.

Hemerobius perla, *Linn. Syst. Nat. Ed.* 12, i. 2, 911, 2; *Faun. Suec. Ed.* 2, 382, 1504. *Geoffr. Ins.* ii. 253, 1, pl. 13, f. 6. *Réaum. Ins.* iii. 411, pl. 33, f. 3. *Frisch. Ins.* iv. 40, pl. 23, f. 5, 6. *Geoffr. Ins. Par.* ii. 253, 1.

Hemerobius chrysops, *Deg. Ins.* ii. 2, 68, 1, pl. 22, f. 1, 2. *Schæff. Icon. Ins. Ratisb.* i. pl. 5, 7, 8. *Scop. Ent. Carn.* 271, 708. *Schr. Ins. Austr.* 312, 625. *Oliv. Enc. Méth.* vii. 60, 8. *Fabr. Ent. Syst.* ii. 83, 6. *Rossi, Faun. Etrusc. Ed.* 2, ii. 15, 687. *Latr. Hist. Nat. Crust.* xiii. 37, 2. *Panz. Faun. Ins. Germ.* lxxxvii. f. 13. *Zett. Ins. Lapp.* 1048, 1. *Ramb. Hist. Nat. Ins. Neur.* 427, 11.

Hemerobius cancellatus, *Schr. Faun. Boic.* ii. 189, 1923.

Chrysopa reticulata, *Leach, Edin. Encycl.* ix. *Sam. Ent. Cab.* ii. 1. *Ins. Transf.* f. 45. *Curt. Brit. Ent.* xi. 520, 3. *Steph. Ill. Brit. Ent. Mand.* vi. 102, 3. *Burm. Handb. Ent.* ii. 2, 980, 8. *Evans, Mon. Chrys. Trans. Ent. Soc. Lond.* v. 4, 78, pl. 10, f. 3. *Brauer, Beschr. Osterreich. Arten, Chrys. Sp.* 12. *Larva*, pl. 2, f. 11.

Hemerobius reticulatus, *Ratzeb. Forst. Ins.* iii. 247.

Chrysopa cancellata, *Wesm. Bull. Acad. Brux.* viii. 1, 208, 2.

Chrysopa maculata, *Steph. Ill. Brit. Ent. Mand.* vi. 102, 4. *Evans, Mon. Chrys. Trans. Ent. Soc. Lond.* v. 4, 78, pl. 10, f. 2.

a—d. England.
e—g. ———? From Mr. Children's collection.

Group 2.

Venæ longitudinales nonnullæ nigræ.

61. CHRYSOPA DORSALIS.

Flavido varia; thorace in lateribus, ventreque toto—fuliginosis; palpis, macula in clypei angulis anticis et in genis,—stria arcuata ad antennarum basin, juxta oculos et inter antennas in vertice furcam formante continuata,—fuliginosis; alis longis angustis, subcosta nigra; fimbriis brevibus; tarsorum unguiculis simplicibus.

Chrysopa dorsalis, *Burm. Handb. Ent.* ii. 2, 981, 10. *Schneid. Mon. Chrys.* 140, 44, pl. 50.
Chrysopa Pini, *Brauer, Beschr. Osterreich. Arten, Chrys. Sp.* 13. *Larva*, pl. 2, f. 12.

Germany.

Subsect. 4.

Alarum venæ omnes fuscæ aut nigræ. Corpus picturis nigris insigne.

62. CHRYSOPA NOBILIS.

Flava; palpis, antennis, stria utrinque in clypei lateribus et in genis,—linea longitudinali media per totum caput et prothoracem percurrente et ejusdem lateribus utrinque, — lineis duabus in antennarum articulo 1o,—maculis in meso- et metathorace et in ventris segmentis—nigris; alis latis, rotundatis; venis nigris, nonnullis ad basin pallidis; fimbriis brevissimis, raris; in femoribus superne linea nigra, tibiis in basi et apice annulo nigro notatis; unguiculis simplicibus.

Chrysopa nobilis, *Heyden, MSS. Schneid. Mon. Chrys.* 142, 45, pl. 51.

Chrysopa elegans, *Burm. Handb. Ent.* ii. 2, 981, 9.
Hemerobius elegans, *Ramb. Hist. Nat. Ins. Neur.* 427, 10.
Europe.

Subdiv. 2.

Labrum antice magis minusve emarginatum. Areola cubitalis 3a plerumque venula divisoria in areolas duas divisa.

Sect. 1.

Antennæ longitudine corpus æquantes vel aliquantum superantes, fuscæ aut nigræ, articulis duobus prioribus lætius coloratis. Corpus plerumque robustum, crassum. Prothorax latior quam longior.

Subsect. 1.

Alarum venæ unicolores, fuliginosæ. Corpus fuliginosum, capite et prothorace exceptis.

63. CHRYSOPA CAPITATA.

Fuliginosa; capite et prothorace aurantiacis; antennis nigris, articulis duobus prioribus aurantiacis; alarum venis fuliginosis; pedibus fulvis, femoribus in apice, tibiis in basi et in apice fuscescentibus; unguiculis simplicibus parum curvatis.

Chrysopa capitata, *Curt. Brit. Ent.* xi. 520, 2. *Steph. Ill. Brit. Ent. Mand.* vi. 102, 2. *Wesm. Bull. Acad. Brux.* viii. 1, 212. 9. *Evans, Mon. Chrys. Trans. Ent. Soc.* v. 4, 78, pl. x. f. 2. *Schneider, Mon. Chrys.* 144, 46, pl. 52.
Hemerobius capitatus, *Fabr. Ent. Syst.* ii. 82, 5. *Guér. Icon. Règ. Anim. Ins. Texte*, 387, pl. 62, f. 4.

a—c. England.

Subsect. 2.

Alarum venæ bicolores, flavæ et fuliginosæ.

Group 1.

Corpus fuliginosum, picturis et maculis flavis insigne.

64. Chrysopa fulviceps.

Fuliginosa; abdominis segmentis in medio et in lateribus flavo cinctis; capite aurantiaco; antennis fuliginosis, articulo 1o flavo, puncto fuliginoso in interiore parte; thorace flavo, pronoto vitta in lateribus et postice,—meso- et metathoracæ maculis,—fuliginosis, insignibus; alarum venis fuliginosis, insignibus; alarum venis fuliginosis, costa, subcosta et radii parte 3a, flavis.

Chrysopa fulviceps, *Steph. Ill. Brit. Ent. Mand.* vi. 101, 1, pl. 30, f. 2. *Evans, Mon. Chrys. Trans. Ent. Soc. Lond.* v. 4, 78, pl. 10, f. 1. *Schneid. Mon. Chrys.* 146, 47, pl. 53.

Hemerobius erythrocephalus, *Ramb. Hist. Nat. Ins. Neur.* 428, 13, pl. 9, f. 5.

a. England.

Group 2.

Corpus flavum vel fulvum, maculis fuscis aut fuliginosis, aut nigris insigne.

65. Chrysopa variegata.

Pallide testacea; capite et palpis fulvis; prothoracè brevi, picturis arcuatis fuliginosis; meso- et metathorace fuliginose cinctis; abdomine fuliginoso, segmentis superne flavo limbatis; alis angustis acutis; venis flavis,—costa ab apice ex parte et radii sectore 2o dimidio fuliginosis; venulis transversis plerisque totis nigris; alæ superioris fine ramuli cubiti et venulæ 1æ marginalis simplicis in margine interiore in maculam parvam nigram conjunctis.

Chrysopa variegata, *Burm. Handb. Ent.* ii. 2, 981, 11. *Schneid. Mon. Chrys.* 147, 48, pl. 54.

Isle St. John.

66. Chrysopa Neurodes.

Flava; capite fulvo; palporum articulo ultimo brevi subacuato; pronoti lateribus vitta lata flavo punctata,—meso- et metathorace maculis—nigris; alis angustis, venis flavis, ex parte nigro variegatis; venulis transversis omnibus nigris, radialibus sub pterostigmate incrassatis; tarsorum unguiculis simplicibus, ad basin incrassatis; abdomine superne in segmentorum lateribus vitta angusta,—in eorum margine posteriore subtus vitta latiore—nigra.

Hemerobius nevrodes, *Ramb. Hist. Nat. Ins. Neur.* 428, 12.
Chrysopa neurodes, *Schneid. Mon. Chrys.* 149, 49, pl. 55.
Cape.

67. Chrysopa æqualis.

Testacea, valida; prothorax ferrugineo marginatus, multo latior quam longior; thorax fusco varius; abdomen fuscum, segmentorum marginibus posticis apiceque testaceis; femora et tibiæ fusco cincta; alæ limpidæ, venulis nonnullis transversis subcubitalibus nigro variis, stigmate longo fusco.

Testaceous, stout: antennæ mutilated; first and second joints tawny: prothorax much broader than long, with two ferruginous bands which are connected on each side by a broad ferruginous stripe: two large brown spots on each side of the thorax connected by two slender bands; metathorax mostly brown: abdomen brown; hind borders of the segments and tip testaceous: femora and tibiæ with brown bands: wings limpid, narrow; costal region nearly thrice broader near the base than by the stigma; two complete series of gradate veinlets; costal areolet as large as the adjoining subcostal areolet; veins pale yellow; subcostal veinlets near the base of the wing black towards the subcosta; transverse veinlets near the base of the wing between the subcostal areolets black; stigma long, pale brown. Length of the body 5 lines; of the wings 18 lines.
a, b———?

68. Chrysopa Italica.

Flava; thoracis lateribus abdominisque vitta media fuliginosis; antennis crassis fuliginosis, in apicem lætioribus, articulis duobus prioribus fulvis; alis albidis,—venis flavidis, venulis gradatis totis,—reliquis plerisque in utroque apice, nigris; pedibus crassis, flavis.

Chrysopa italica, *Burm. Handb. Ent.* ii. 2, 981, 13. *Schneid. Mon. Chrys.* 151, 50, pl. 56.
Hemerobius Italicus, *Rossi, Faun. Etrusc. Ed.* 1, 12; *Ed.* 2, 14, 684, pl. 10, f. 12. *Ramb. Hist. Nat. Ins. Neur.* 429, 14.
Hemerobius lateralis, *Oliv. Enc. Méth. Hist. Nat.* vii. 61, 10, pl. 96, f. 8.
Var. Hemerobius grandis, *Ramb. Faun. Ent. de l'Andal.* ii. pl. 9, f. 6.
South Europe.

69. Chrysopa stigmatica.

Fulva; antennis nigris, articulo 1o *aurantiaco; prothorace brevissimo; lineolis duabus fuliginosis transversis in media parte; meso- et metathorace flavo-virens postice fuliginose maculatis; alarum venis fulvis, macula parva fuliginosa prope ad earum basin; venularum sectoris* 2i *parte, cubiti, ejusque rami, ut postcostæ parte totis vel ex parte nigro—circumfusis; alæ inferioris venis unicoloribus; pedibus fuscis, femoribus tibiisque in apice flavis.*

Chrysopa stigmatica, *Schneid. Mon. Chrys.* 152, 51, pl. 57.
Hemerobius stigmaticus, *Ramb. Faun. Ent. de l'Andal.* ii. pl. 9, f. 8; *Hist. Nat. Ins. Neur.* 429, 15.

a, b. Malaga. Presented by Benjamin Frend, Esq.
c. Algeria. From M. Parzudaki's collection.

70. Chrysopa insignis.

Lutea, crassa, nigro maculata; antennæ fuscæ, robustæ, articulis testaceo cinctis; alæ hyalinæ, sat angustæ, venis viridibus optime determinatis, venulis transversis nigris.

Pale luteous, very stout: face slightly furrowed transversely: antennæ brown, stout, shorter than the wings, with a testaceous ring on the fore border of each joint: prothorax convex along the fore border, with a slight dorsal furrow, and with three black marks on each side; its breadth much more than twice its length: mesothorax with two oblique converging black marks on each side in front: metathorax with two slight black marks towards the fore border: abdomen with two black spots on each side at the base, and with some blackish marks beneath: legs pale luteous: wings hyaline, rather narrow; veins pale green, strongly marked; transverse veinlets of the fore-wings black, of the hind-wings mostly black at

each end, areolets rather more numerous than usual; cubital areolet as large as the adjoining subcubital areolet; stigma long, pale testaceous. Length of the body 5 lines; of the wings 22 lines.

a. New Holland.

Sect. 2.

Antennæ longiores quam alæ, unicolores, læte coloratæ. Corpus gracile. Prothorax longior quam latior.

Subsect. I.

Corpus maculatum.

71. Chrysopa varia.

Vireo-flava; vertice antice ferrugineo cincto; antennis 3a parte alis longioribus, articulis duobus prioribus sanguineis; macula in genis, puncto postice utrinque juxta oculos, et puncto in pronoti angulis anticis,—sanguineis; meso- et metathorace,—abdominis segmentis tribus penultimis superne maculis fuliginosis; alis anticis latis, rotundatis posticis acutis; venis pallidis; venulis transversis nonnullis nigris; pterostigmate ab initio macula fusca; fimbriis longis.

Chrysopa varia, *Schneid. Mon. Chrys.* 154, 52, pl. 58.

a. West Coast of America. Presented by Capt. Wood, and Lieut. Wood.
b. Pará. From Mr. Stevens' collection.
c. Brazil.

72. Chrysopa ampla.

Lutea, subtus flava; antennæ flavæ, gracillimæ, alis multo longiores, basi rufescentes; prothorax flavescens, conicus, vix longior quam latior; thorax fusco maculatus; abdomen nonnunquam piceum; alæ albidæ, sat latæ, venulis fusco variis, venula basali subcubitali fusco-nebulosa, stigmate fusco.

Luteous, yellow beneath: antennæ yellow, very slender, minutely pubescent, very much longer than the wings; first and second joints reddish: prothorax yellowish, conical, hardly longer than broad; mesothorax and metathorax with eight brown spots: legs yellow:

wings whitish, rather broad; marginal region broad; costal region of the fore-wings twice broader near the base than by the stigma; second sector of the radius not wanting as in *C. leptalea*; cubital areolet nearly equal in size to the adjoining subcubital areolet; veins pale yellow; veinlets of the two sectors with very few brown marks; apical and cubital veinlets and second series of gradate veinlets mostly brown; veinlet between the hind borders of the second and third subcubital areolets clouded with brown: hind-wing veins of one colour; stigma brownish. Length of the body 5 lines; of the wings 20—22 lines.

Var. β. Spots on the thorax very indistinct: abdomen pitchy, pale at the base.

a. Georgia. From Mr. Abbot's collection.
b——— ? From Mr. Children's collection.

73. Chrysopa insularis.

Testacea, subtus pallidior; caput rufo varium; antennæ testaceæ, alis multo longiores; prothorax conicus; abdominis segmentorum margines postici fusci; alæ limpidæ, anticæ fusco uniguttatæ, stigmate fusco, venis viridibus nigro variis.

Testaceous: head reddish towards the mouth, and with a reddish band on the vertex: antennæ testaceous, much longer than the wings: prothorax conical, longer than broad: hind borders of the abdominal segments brown, under side and legs pale testaceous: wings limpid, broad; marginal regions as broad as that of *C. vulgaris*; veins pale green, here and there blackish; stigma small, pale brown; a brown dot on one of the transverse veins of the fore-wings at three-fourths of the length from the base and at one-third of the breadth from the hind border; the adjoining series of gradate transverse veins black. Length of the body 4½ lines; of the wings 18 lines.

a. Jamaica. From Mr. Gosse's collection.

74. Chrysopa conformis.

Testacea; antennæ obscuriores, basi nigricantes; pedes pallidi; alæ limpidæ, immaculatæ, stigmate testaceo, venis viridibus nigro variis.

The dark antennæ, the pale hind borders of the abdominal segments and the unspotted wings distinguish this species from *C.*

insularis. Pale testaceous: antennæ darker, blackish towards the base: abdomen of one colour: legs whitish or pale green: wings limpid, without spots; veins pale green, here and there blackish; stigma pale testaceous. Length of the body 4 lines; of the wings 15 lines.

a. Jamaica. From Mr. Gosse's collection.

Subsect. 2.

Corpus unicolor.

75. Chrysopa longicollis.

Corpore gracili elongato, læte fusco; ore elongato; antennis tenuissimis, longis; prothorace duplo longiore quam latiore; alis elongatis,—inferioribus sublanceolatis; vitta fusca diluta juxta marginem posteriorem percurrente; venis fulvis; pterostigmate brevi fuliginoso; alæ anticæ venulis gradatis seriei 2æ totis, venulis subcostalibus, plerisque marginalibus ab initio furcatis, —posticæ venulis subcostalibus totis, nonnullis marginalibus ab initio furcatis—nigris.

Chrysopa longicollis, *Schneid. Mon. Chrys.* 156, 53, pl. 59.
Hemerobius longicollis, *G. R. Gray, Griff. Anim. Kingd.* xv. 331, pl. 72, f. 3.

76. Chrysopa antica.

Lutea, aut testacea; antennæ testaceæ, graciles, alis multo longiores; prothorax sublinearis, fere duplo longior quam latior; pedes flavi; alæ limpidæ, venulis fusco variis, stigmate fusco perangusto.

Luteous, testaceous beneath: antennæ testaceous, slender, very much longer than the wings: prothorax almost linear, its length a little less than twice its breadth: legs pale yellow: wings limpid, of moderate breadth; costal region not broad, its breadth by the stigma less than half that near the base; twelve areolets between the radius and its second sector, and thirteen between the second sector and the first sector; first series of gradate veinlets mostly wanting; cubital areolet not one-third of the size of the adjoining subcubital areolet; veins very pale green; veinlets of the subcosta and of the second sector slightly marked with brown; second sector

brown at the base; forked marginal veinlets towards the base and second series of gradate veinlets brown; hind-wings having the veinlets of the subcosta and the forks of the marginal veinlets slightly brown; stigma brown, very narrow. Length of the body 5—6 lines; of the wings 16—18 lines.

Var. β. Testaceous: abdomen slightly brownish, testaceous at the base.

a, *b*. Sierra Leone. Presented by the Rev. D. F. Morgan.

77. Chrysopa diversa.

Testacea; antennæ alis multo longiores; prothorax antice angustior, paullo latior quam longior; pedes flavi; alæ limpidæ, angustæ, venulis transversis fusco variis, stigmate flavo.

Testaceous: antennæ minutely pubescent, very much longer than the wings: prothorax narrower in front, a little broader than long: legs pale yellow: wings limpid, narrow; costal region narrow, not half so broad by the stigma as near the base; two complete series of gradate veinlets; cubital areolet about half the size of the adjoining subcubital areolet; veins pale yellow, setose; transverse veinlets partly tinged with pale brown; stigma yellow. Length of the body 4 lines; of the wings 15 lines.

a, *b*. ———? From Mr. Children's collection.

78. Chrysopa Marionella.

Antennæ gracillimæ, pubescentes, alis multo longiores; abdomen longissimum, gracillimum; alæ latissimæ, pubescentes; tuberculæ duæ albidæ in ala antica, fusco univittatæ et quadrifasciatæ.

Hemerobius Marionella, *Guér. Rev. Zoologique.*

Antennæ very slender, pubescent, especially towards the base, much longer than the wings: abdomen very long and slender: wings very broad, very pubescent; marginal region very deep; disk of the fore-wings with two whitish tubercles, each of them with a brown stripe and four brown bands.

a. Pará. From Mr. Hewitson's collection.

79. Chrysopa aurifera.

Testacea; caput supra ferrugineum, facie rufo varia; antennæ albidæ, gracillimæ, alis multo longiores; prothorax antice angustior, paullo longior quam latior; thoracis discus ferrugineus; abdomen longissimum, gracillimum, apice supra ferrugineum; pedes albidi; alæ limpidæ, pubescentes, latissimæ, basi iridescentes, apud marginem auratæ, anticæ fusco bituberculatæ.

Like *C. Marionella* in structure. Testaceous: head ferruginous above, red about the face, very pale near the mouth: antennæ whitish, very slender, slightly pubescent, very much longer than the wings: prothorax slightly narrower in front, a little longer than broad, reddish about the hind border: disk of the mesothorax and of the metathorax ferruginous: abdomen very long and slender, ferruginous above towards the tip: legs whitish; wings limpid, very broad, very pubescent, adorned with iridescent reflections at the base, and with gilded reflections about the borders and about the two brown tubercles in the disk of each fore-wing; marginal region very broad; veins pale testaceous, black about the tubercles: hind-wings longer than the fore-wings. Length of the body 7—9 lines; of the wings 27—30 lines.

a. Ceylon. Presented by R. Templeton, Esq.
b. Ceylon. From the Rev. J. Wenham's collection.

80. Chrysopa lutea.

Lutea, longa, gracillima; antennæ albidæ, gracillimæ, alis multo longiores; prothorax antice angustior, multo longior quam latior; abdomen ferrugineum; pedes albidi; alæ limpidæ, latæ, anticæ tubercula una guttisque duabus fuscis, posticæ fusco quadriguttatæ.

This species resembles *C. aurifera* and *Marionella*, but has the peculiar characters of the group less developed. Luteous, long and slender: head paler than the thorax: antennæ whitish, very slender, much longer than the wings, pale luteous towards the base: prothorax slightly narrower in front, much longer than broad: abdomen ferruginous except at the base: legs whitish: wings limpid, broad; marginal region very deep, half the breadth of the discal region; a dark brown tubercle on the disk of the fore-wing, by the gradate veinlets, which are blackish and partly clouded with brown; a brown

dot on the hind border of the fore-wing, two on the fore border of the hind-wing, and one on the disk of the latter; veins whitish, black towards the tips of the fore-wings between the marginal region and the disk, and towards the tip of the hind border. Length of the body 6 lines; of the wings 19 lines.

a. Australia. From Mr. Strange's collection.

Div. 2.

"Caput antice paullo abbreviatum; alæ inferiores superioribus vix longiores; in area discoidali tres vel quatuor venularum gradatarum interruptæ series; area cubitalis angustissima; cubitus non fractus, primo sectori parallelus; areolæ cubitales oblongæ quadrangulæ, tertia sine venulæ secante." *Schneider.*

Apochrysa, *Schneider, Monogr. Chrysop.* 38, 157.

81. Chrysopa leptalea.

Fulva; palpi pallidi; antennæ maris alis paullo longiores, fœminæ breviores,—fulvæ, articulis duobus prioribus exterius stria obscure rufa; prothorax latitudine duplo longior,—postice utrinque lineola nigra; alæ magnæ, acutæ, albidæ; venis pallidis, in margine posteriore nebula fumata diluta; 1a venularum gradatarum serie in media ala postica nigra, nebula fusca, aureo-splendente circumfusa; abdomen in lateribus linea obscure rufa cinctum.

Apochrysa leptalea, *Schneid. Mon. Chrys.* 159, 1, pl. 60.
Hemerobius leptaleus, *Ramb. Hist. Nat. Ins. Neur.* 429, 16.
Cape.

Species dubiæ.

82. Chrysopa filosa.

Cinerea; antennæ longissimæ; alæ exalbidæ.

Hemerobius filosus, *Fabr. Ent. Syst.* ii. 82, 3.
Otaheite.

83. Chrysopa candida.

Pallida ; alæ hyalinæ, anticæ punctis tribus fuscis.

Hemerobius candidus, *Fabr. Ent. Syst. Suppl.* 202.

East Indies.

84. Chrysopa iridea.

Lutea ; alæ albæ, irideæ, maculis difformibus fuscis.

Hemerobius irideus, *Oliv. Enc. Méth. Hist. Nat. Ins.* vii. 50, 4.

Surinam.

85. Chrysopa margaritina.

Viridis, pallida ; antennæ fuscæ, pubescentes, corpore longiores ; alæ subpilosæ, iridescentes.

Hemerobius margaritinus, *Palisot de Beauvois, Ins.* 87, pl. 7, f. 5.

Benin.

86. Chrysopa lateralis.

Viridis ; antennæ nigro-fuscæ, basi rufæ, corpore longiores ; caput et prothorax lateribus rufis ; tarsi fulvi ; alarum venæ virides.

Hemerobius lateralis, *Guér. Icon. Règne Anim. Ins. Texte*, 388.

Vera Cruz.

87. Chrysopa flaviceps.

Flava ; caput fulvum, fasciis tribus e punctarum nigrarum ; antennæ obscuræ, basi fulvæ ; prothorax viridis, maculis lateralibus fasciaque interrupta nigris ; meso- et metathorax maculis lateralibus fuscis ; alæ venis flavis aut fuscis, ptero-stigmate rufo-flavo.

Hemerobius flaviceps, *Brullé ; Webb et Berthelot, Hist. Nat. Iles Canaries, Ent.* 83.

Canaries.

88. CHRYSOPA CONFORMIS.

Viridis; antennæ rufo-fuscæ, alis longiores, articulo 1o maximo flavo; alæ albido-hyalinæ, venis pallide rufescentibus, venulis, rufo-fuscis.

Hemerobius conformis, *Ramb. Hist. Nat. Ins. Neur.* 426, 8.

Colombia.

89. CHRYSOPA VALIDA.

Viridis, C. Italica *crassior, alis latioribus brevioribus; thorax vittis duabus rufo-fuscis; alæ limpidæ, venis pallidis, venulis apicalibus nigris.*

Hemerobius validus, *Erichson, Schomburgk, Brit. Guiana*, 586.

Guiana.

90. CHRYSOPA ANGUSTIPENNIS.

Pallide viridis, immaculata; alæ subelongatæ, angustiores apice rotundato, venis virescentibus.

Allied to *C. Alba.*

Chrysopa angustipennis, *Steph. Ill. Brit. Ent. Mand.* vi. 104, 10. *Evans, Mon. Chrys. Trans. Ent. Soc. Lond.* v. 78, pl. 9, f. 3.

England.

91. CHRYSOPA SUBFALCATA.

Luteo-viridis, immaculata; alæ elongatæ attenuatæ, apice acuto subfalcato, venis virescentibus.

Allied to *C. vulgaris.*

Chrysopa subfalcata, *Steph. Ill. Brit. Ent. Mand.* vi. 105, 13. *Evans, Mon. Chrys. Trans. Ent. Soc. Lond.* v. 78, pl. 9, f. 5.

England.

92. CHRYSOPA QUADRIMACULATA.

Fuscescens; caput flavo-fuscum, maculis duabus nigris; antennæ, prothorax et pedes flava; alæ hyalinæ, iridescentes, venis flavescentibus, stigmatibus fuscis.

Hemerobius quadrimaculatus, *Guér. Icon. Règne Anim. Ins. Texte*, 388.

China.

93. Chrysopa abdomine-punctata.

Pallide cyaneo-viridis; prothorax vittis duabus punctoque discali rufo-fuscis; mesothorax punctis duobus rufo-fuscis; antennæ alarum longitudine; abdominis segmenta rufo-fusco bimaculata; alæ venis cyaneo-viridibus punctis nonnullis nigris.

Chrysopa abdomine-punctata, *Brauer, Beschr. Osterreich. Arten, Chrys.* 7, *Sp.* 8, pl. 2, f. 7.

Austria.

Genus 5. HEMEROBIUS.

Ocelli nulli. Palporum maxillarium articuli duo ultimi eadem inter se circiter longitudine. Antennæ moniliformes. Ungues tenues. Plantulæ apice muticæ.

Hemerobius, p., *Linn; Fabr.; Vill.; Geoffr.; Sulz.; Schæff.; Deg.; Schr.; Barbut; Donov.; Stew.; Turt.; Shaw; Oliv.; Panz.; Latr.*
Hemerobius et Drepanepteryx, *Leach; Steph.*
Hemerobius et Drepanopteryx, *Burm.*
Hemerobius, Drepanopteryx et Sisyra, *Wesm.*
Hemerobius, Drepanepteryx et Psychopsis, *Newm.*
Micromus, Megalomus, et Mucropalpus, *Ramb.*
Hemerobina, *Schneider, Monogr. Chrysop.* 35.

"Subcosta et radius paralleli et segregatim usque ad alæ acumen percurrentes—rarius ante apicem alæ conjuncti; unus, vel duo vel plures sectores a radio oriundi, plerumque plures in ramos partiti, quorum venæ finales pluries furcatæ; venularum gradatarum duæ vel tres tantum series formatæ; area cubitalis deficiens; antennæ fere semper corpore paullo breviores, moniliformes." *Schneider.*

Div. 1.

Palporum maxillarium articuli duo ultimi eadem inter se circiter longitudine. Antennæ moniliformes. Unguiculi tenues. Plantulæ in processum dentiformem utrinque desinentes. Alæ anticæ emarginatæ, angulatæ.

1. Hemerobius viridipennis.

Viridi-testacea, lata, crassa, hirta; antennæ testaceæ, corporis dimidio breviores; prothorax duplo longior quam latior; alæ anticæ virides confertim areolatæ, posticæ albidæ.

Body broad, stout, greenish testaceous, hairy, testaceous beneath: head short: antennæ testaceous, submoniliform, not half the length of the body; joints successively decreasing in length: length of the prothorax about half its breadth; hind segment transversely semi-elliptical, with a longitudinal suture: abdomen and legs testaceous: fore-wings vivid pale green, with indistinct ferruginous dots and oblique stripes; marginal region very broad and convex near the base where it projects on each side of the head, moderately broad towards the tip; subcostal veinlets along the greater part of the length, forked towards the costa, and connected together towards the subcosta by many transverse veinlets which form numerous areolets; space between the subcosta and the radius intersected at nearly equal distances by transverse veinlets which generally form rectangular areolets; second sector of the radius forked six times successively, some of its forks also divided; disk of the wing occupied by numerous little areolets which are mostly tetragonal, but occasionally pentagonal or hexagonal; veinlets along the hind border mostly forked: hind-wings whitish, tinged with green along the borders; veins green, in structure much resembling those of the fore-wings. Length of the body 10 lines; of the wings 34 lines.

a. East Indies. From Mr. Stevens' collection.

2. Hemerobius phalænoides.

Obscure testacea; alæ anticæ strigis duabus obliquis punctoque fuscis, maculaque triangulari marginali alba.

Hemerobius phalænoïdes, *Linn. Syst. Nat.* ii. 912, 5; *Faun. Suec.* 1508. *Fabr. Ent. Syst.* ii. 83, 8. *Sulz. Gesch.* pl. 25, f. 2. *Roemer, Gen. Ins.* pl. 25, f. 2. *Schæff. Icon. Ins. Ratisb.* i. pl. 3, f. 11. 12. *Deg. Ins.* ii. 714, 4, pl. 22, f. 12, 13. *Réaum. Ins.* iii. 390, pl. 32, f. 8. *Schr. Ins. Austr.* 313, 628. *Faun. Boic.* ii. 190, 192, 5. *Vill. Ent. Linn.* iii. 48, 4. *Panz. Faun. Ins. Germ.* 87, 15. *Oliv. Enc. Méth.* vii. 61, 11. *Petagn. Inst. Calab.* i. 336, 4.

Drepanepteryx phalænoïdes, *Steph. Ill. Brit. Ent. Mand.* vi. 100, 1, pl. 33, f. 1.

Drepanopterpx phalænodes, *Burm. Handb. Ent.* ii. 975, 1. *Wesm. Mon. Hémérob. Belg.* 17. *Bull. Acad. Roy. Brux.* viii. 219.

Megalomus phalænoides, *Ramb. Hist. Nat. Ins. Neur.* 418, 1.

a. Germany.

3. Hemerobius binoculus.

Fuscescens; alæ sordide hyalinæ, pilosæ, ocello magno, maculis plurimis minoribus fuscis.

Drepaneptaryx binoculus, *Newm. Ent. Mag.* v. 400.

a. New Holland. Presented by the Entomological Club.
b. New Holland. From the Rev. J. Wenham's collection.
c, d. New Holland. From Mr. Argent's collection.

4. Hemerobius flavicornis.

Ferrugineus; capite prothoraceque testaceis; abdomine piceo; antennæ flavæ; pedes testacei, fusco cincti; alæ subcinereæ, fusco subnebulosæ, anticæ apice fusco strigatæ, posticæ fusco unimaculatæ.

Distinguished from *H. phalænoides* and from *H. binoculus* by its much narrower marginal region. Ferruginous: head and prothorax testaceous: antennæ yellow: abdomen pitchy: legs pale testaceous, with brown rings: wings grayish, indistinctly clouded with pale brown: fore-wings with some brown streaks near the tips, which are brown; stigma brown, tawny towards the tip: hind-wings with a brown spot near the hind border opposite the stigma, and with a testaceous tinge along the tips; veins with whitish and brown rings which are most conspicuous in the fore-wings.

Var. *β*. Fore-wings without brown streaks; hind-wings without the brown spot near the hind border. Length of the body 3 lines; of the wings 10 lines.

a. North America. Presented by the Entomological Club.
b. Georgia. From Mr. Abbot's collection.

5. Hemerobius hamatus.

Testaceus; antennæ flavæ; pedes pallidi; alæ subhyalinæ, fusco conspersæ, margine postico excisæ, apice subhamatæ.

Marginal region of the fore-wings narrower than that of *H. flavicornis*; hind border more indented towards the tip, which is almost hooked. Testaceous: antennæ pale yellow: legs pale testaceous: wings subhyaline: fore-wings very minutely and indistinctly sprinkled with pale brown; borders at the tip alternately brown and

whitish; stigma brown, lurid towards the tip. Length of the body 3 lines; of the wings 10 lines.

a. North America. Presented by the Entomological Club.

Div. 2.

Alæ non emarginatæ. Regio marginalis latissima.

6. Hemerobius Mimicus.

Alæ albidæ; anticæ macula antica fusca, postica rosea, lineisque transversis obliquis fuscis ornatæ; alæ posticæ macula subrotunda pone medium sita fusca signatæ. Long. 5 lin.; alar. 20 lin.

Psychopsis mimica, *Newm. Entomologist*, 415, fig. title-page.

a. Adelaide. Presented by the Entomological Club.
b, c. Australia. From Mr. Ker's collection.
d. South Australia. From Mr. Stevens' collection.

7. Hemerobius cœlivagus.

Niger; facies flavo bimaculata; antennæ piceæ, articulis basi testaceis; pedes testacei, femoribus piceis; alæ albæ, anticæ cinereo maculatæ vittaque lata arcuata metallico-resplendente ornatæ.

This species and the preceding are distinguished from the other *Hemerobii* by the breadth of the marginal region or space between the costal and subcostal veins. Black, shining, clothed with whitish hairs: head smooth; face with a yellow spot on each side by the antennæ: antennæ 17-jointed, pitchy, short, submoniliform; joints testaceous at the base: legs pale testaceous; thighs pitchy: wings white: fore-wings gray at the tips, and with gray spots along the borders, and above the disk with a curved broad deep brown stripe which has various-coloured metallic reflections; hind-wings with a round brown spot towards the tip. Length of the body 3½ lines: of the wings 15 lines.

a. Australia. From Mr. Strange's collection.

8. Hemerobius hirtus.

Piceus; thoracis linea dorsalis maculæque ochraceæ; alæ subochraceæ, fimbria subinterrupta fuscescente.

Hemerobius hirtus, *Linn. Syst. Nat.* ii. 912. *Stew. El. Nat. Hist.* ii. 216. *Donov. Brit. Ins.* iv. pl. 113, f. 1, 2. *Turt. Syst. Nat.* iii. 401. *Steph. Ill. Brit. Ent. Mand.* vi. 166, 1. *Wesm. Bull. Acad. Roy. Brux.* viii. 218, 11.
Hemerobius fimbriatus, *Curtis, Brit. Ent.* v. pl. 202. *Steph. Ill. Brit. Ent. Mand.* vi. 113, 26.

Radius with six sectors.

a. England.
b.———? From Mr. Children's collection.

9. Hemerobius tortricoides.

Rufus, fascia verticis fronteque nigris; prothorax striis duabus transversis distinctis; pedes pallidi; alæ anticæ latæ, breves, apice rotundatæ, venulis transversis bilineatæ.

Megalomus tortricoides, *Ramb. Hist. Nat. Ins. Neur.* 419, 2.
Hemerobius hirtus, *Linn.?*

Buda; Hungary.

10. Hemerobius pyraloides.

Obscure rufus, supra subnigricans; alæ anticæ rufescentes, subhyalinæ.

Megalomus pyraloïdes, *Ramb. Hist. Nat. Ins. Neur.* 419, 3.

Resembling *H. tortricoïdes:* fore-wings less rounded at the tips, covered with a great number of darker indistinct transverse lines which form punctures on the veins; with two transverse lines of veinlets, the outer one more oblique than in *H. tortricoïdes.*

France.

11. Hemerobius tineoides.

Parvus, nigricans, rufo varius; caput rufescens; antennæ rufescentes; thorax maculis rufescenti-flavis; prothorax striis duabus longitudinalibus; abdomen rufo-fuscum; alæ anticæ rufescentes, subhyalinæ, punctis obscurioribus, marginibus fusco strigatis.

Megalomus tineoides, *Ramb. Hist. Nat. Ins. Neur.* 420, 4.

South Spain.

Div. 3.

Regio marginalis non dilatata.

Subdiv. 1.

Radii sector unus trifurcatus.

12. Hemerobius longicollis.

Piceus, hirtus; caput ferrugineum; antennæ luteæ, corpore paullo longiores; prothorax tricarinatus, multo longior quam latior; pedes testacei; alæ subcinereæ, anticæ fusco-nebulosæ.

Allied to *Chrysopa?* Pitchy, hairy: head ferruginous: antennæ luteous, rather stout, a little longer than the body: prothorax narrower in front, much longer than broad, with three slight longitudinal ridges: legs testaceous: wings grayish: fore-wings indistinctly and minutely clouded with pale brown; stigma lurid; subcostal transverse veinlets much fewer and less strongly marked than those of *H. fuscus*; space between the subcosta and the radius much broader; vein running parallel to the radius emitting several successive branches; first series of gradate areolets nearly complete, the second mostly wanting; longitudinal veins more numerous than those of *H. fuscus*; veins of the hind-wings much paler and less distinct; fore-wings much longer than the hind-wings. Length of the body 2½—3 lines; of the wings 7—8 lines.

a, b. Georgia. From Mr. Abbot's collection.

Subdiv. 2.

Radii sectores tres.

Sect. 1.

Radii sector 1us bifurcatus.

Subsect. 1.

Radii sector 2us bifurcatus.

Group 1.

Radii sector 3us unifurcatus.

13. HEMEROBIUS SUBANTICUS.

Ferrugineus; caput antice testaceum; antennæ pallidiores; pedes testacei; alæ subluridæ, angustæ, venis testaceis fusco guttatis, venulis gradatis fuscis nebulosis.

Dark ferruginous: head testaceous in front: antennæ pale ferruginous: legs pale testaceous; wings slightly lurid, rather narrow; veins pale testaceous; veins of the fore-wings with brown dots; two very incomplete series of gradate veinlets which are dark brown and clouded. Length of the body 1½ line; of the wings 5½ lines.

a. St. John's Bluff, East Florida. Presented by E. Doubleday, Esq.

Group 2.

Radii sector 3us bifurcatus.

14. HEMEROBIUS OBSCURUS.

Fusco-ochraceus; thoracis latera fusca; alæ abbreviatæ pallide fuscescentes, venis subsaturatioribus obsoletissime albido punctatis.

Hemerobius obscurus, *Leach, MSS. Steph. Ill. Brit. Ent. Mand.* vi. 108, 8.

a, *b*. England.

15. Hemerobius posticus.

Ferrugineus; antennæ testaceæ, corpore longiores; alæ subhyalinæ; anticæ fusco-nebulosæ, venis testaceis fusco fasciatis; posticæ venulis gradatis seriei 2æ fusco subnebulosis.

Dark ferruginous: head paler: antennæ testaceous, longer than the body: wings almost hyaline: fore-wings mottled with pale brown, especially towards the tips and along the hind borders; veins pale testaceous, with numerous brown bands; two complete series of gradate veinlets which are dark brown and clouded: hind-wings also with two complete series of gradate veinlets, the second series brown and slightly clouded; all the other veins wholly pale testaceous. Length of the body 2—2¼ lines; of the wings 7—8 lines.

a, *b*. Georgia. From Mr. Abbot's collection.

Group 3.

Radii sector 3us trifurcatus.

16. Hemerobius fuscus.

Fuscus; clypeus nitidissimus; frons, thoracis dorsum, antennæ et pedes ochracco-flava; alæ fuscescentes, venis saturatioribus albo punctatis.

Hemerobius fuscus, *Leach, MSS.* · *Steph. Ill. Brit. Ent. Mand.* vi. 107, 4.

a—*d*. England. Presented by J. C. Dale, Esq.
e—*p*. England.
q. ——— ? From Mr. Children's collection.

17. Hemerobius subnebulosus.

Pallidus; clypeus et thoracis latera piceo-rufa; alæ albidæ, anticæ margine interno subnebuloso, venis albidis fusco punctatis.

Hemerobius subnebulosus, *Steph. Ill. Brit. Ent. Mand.* vi. 107, 6.

a. England. Presented by F. Walker, Esq.

Group 4.

Radii sector 3us quadrifurcatus.

18. HEMEROBIUS PALLIDUS.

Ochraceo-pallidus; prothoracis abdominisque latera picea; alæ hyalinæ, costa venisque punctatis fuscescentibus.

Hemerobius pallidus, *Steph. Ill. Brit. Ent. Mand.* vi. 112, 24.

a. England.
b. ——— ? From Mr. Children's collection.

Subsect. 2.

Radii sector 2us unifurcatus.

19. HEMEROBIUS PELLUCIDUS.

Piceus; antennæ nigræ, corpore breviores; abdomen subtus testaceum; pedes testacei; alæ subhyalinæ, venis testaceis.

Pitchy: antennæ black, shorter than the body: abdomen testaceous beneath: legs pale testaceous: wings subhyaline; veins testaceous; two incomplete series of gradate veinlets; two transverse subcubital veinlets slightly clouded; stigma slightly testaceous. Length of the body 1¼—1½ line; of the wings 4—4½ lines.

Hemerobius pellucidus, *Dale, MSS.*

a—*c*. England. Presented by J. C. Dale, Esq.

Sect. 2.

Radii sector 1us unifurcatus.

Subsect. 1.

Radii sector 2us bifurcatus, 3us trifurcatus.

20. HEMEROBIUS NERVOSUS.

Nigricans; vertex thoracisque dorsum flavicantia; alæ variegatæ, venis albo-punctatis.

Hemerobius nervosus, *Fab. Ent. Syst.* ii. 85, 19. *Deg. Ins.* ii. 711, 2, pl. 2, f. 4, 5. *Turt. Syst. Nat.* iii. 402? *Walck. Faun. Paris.* ii. 18, 6. *Steph. Ill. Brit. Ent. Mand.* vi. 108, 10. *Wesm. Mon. Hémérob. Belg.* 15, 9. *Bull. Acad. Roy. Brux.* viii. 217, 9.

a. ——— ? From Mr. Children's collection.

21. Hemerobius nebulosus.

Ochraceo pallidus; antennæ fusco annulatæ; thoracis latera fusca; alæ albidæ opalinæ, anticæ fusco-nebulosæ, venis fuscis.

Hemerobius nebulosus, *Step. Ill. Brit. Ent. Mand.* vi. 107, 5.

a. Germany.

22. Hemerobius simulans.

Piceus; caput ferrugineum; antennæ piceæ, basi ferrugineæ; pedes testacei; alæ cinereæ, anticæ fusco-nebulosæ, maculis tribus subcubitalibus fuscis, margine postico albido maculato.

Pitchy: head ferruginous: antennæ pitchy, ferruginous at the base: prothorax short, much broader than long: legs testaceous: wings gray: fore-wings indistinctly and minutely clouded with brown; veins black; two series of gradate veinlets almost complete, more distinctly clouded with brown; three brown spots on the subcubital veinlets; a row of whitish spots along the hind border. The dark antennæ of this species seem to be the only character which distinguishes it from *H. nervosus*. Length of the body 2¼ lines; of the wings 7 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by Dr. Barnston.

Subsect. 2.

Radii sector 2us unifurcatus.

Group 1.

Radii sector 3us quadrifurcatus.

23. Hemerobius marginatus.

Pallide ochraceus; alæ albæ, venis transversis nebulisque aliquot ad marginem internum fuscis.

Hemerobius marginatus, *Steph. Ill. Brit. Ent. Mand.* vi. 109, 12.

a. Nova Scotia. From Lieut. Redman's collection

Group 2.

Radii sector 3us trifurcatus.

24. Hemerobius Humuli.

Pallide ochraceus; antennæ fusco alboque annulatæ; pedes pallidi; alæ hyalinæ, punctis fuscis sparsis.

Hemerobius Humuli, *Linn. Syst. Nat.* ii. 912, 10; *Faun. Suec.* 1507. *Geoffr. Ins.* ii. 912, 10. *Schr. Ins. Austr.* 313, 626; *Faun. Boic.* ii. 191, 1927. *Vill. Ent. Linn.* iii. 47, 6. *Fab. Ent. Syst.* ii. 84, 13. *Oliv. Enc. Méth.* vii. 62, 14. *Latr. Hist. Nat. Ins.* xiii. 38, 7. *Turt. Syst. Nat.* iii. 402. *Steph. Ill. Brit. Ent. Mand.* vi. 108, 7. *Burm. Handb. Ent.* ii. 974, 5. *Wesm. Mon. Hémérob. Belg. Bull. Acad. Roy. Brux.* viii. 215, 3.

a. England. Presented by F. Walker, Esq.

b, c. Georgia. From Mr. Abbot's collection.

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25. Hemerobius perelegans.

Piceus; frons thoracisque dorsum testacea; antennæ fulvæ, fusco annulatæ; alæ fuscæ albo concinne variegatæ et punctatæ.

Hemerobius perelegans, *Step. Ill. Brit. Ent. Mand.* vi. 109, 11.
Hemerobius Humuli, var.?

a. England. Presented by F. Walker, Esq.

26. Hemerobius lutescens.

Flavescens; alæ albæ, fusco substrigosæ.

Hemerobius micans, *Oliv. Enc. Méth.* vii. 63, 19. *Wesm. Mon. Hémérob. Belg.* 14, 7. *Bull. Acad. Roy. Brux.* viii. 216, 7.
Hemerobius lutescens, *Fabr. Ent. Syst.* ii. 84, 12. *Deg. Ins.* ii. pl. 22, f. 8? *Turt. Syst. Nat.* iii. 402. *Latr. Hist. Nat. Ins.* xiii. 38, 6. *Steph. Ill. Brit. Ent. Mand.* vi. 109, 13. *Burm. Handb. Ent.* ii. 974, 4.
Hemerobius paganus? *Vill. Ent. Linn.* iii. 49, 7.
Micropalpus lutescens, *Ramb. Hist. Nat. Ins. Neur.* 420, 1.

a—e. England.
f. ———? From Mr. Children's collection.

27. Hemerobius affinis.

Pallide ochraceus; thoracis latera et abdomen nigricantia, segmentorum marginibus albidis; alæ albidæ anticæ postice fusco subnebulosæ, venis pallidis.

Hemerobius affinis, *Leach MSS. Steph. Ill. Brit. Ent. Mand.* vi. 109, 14.

England.

28. Hemerobius paganus.

Lutescens; antennis pedibusque pallidis; alæ albæ, anticæ obscure subfasciatæ.

Hemerobius paganus, *Linn. Syst. Nat.* ii. 912. *Turt. Syst. Nat.* iii. 403. *Steph. Ill. Brit. Ent. Mand.* vi. 110, 16.

a, *b*. England. Presented by J. C. Dale, Esq,
c, *d*. England.
e, *f*. ——— ? From Mr. Children's collection.

29. Hemerobius apicalis.

Rufo-ochraceus; thoracis latera et abdomen picea; pedes pallidi; alæ opalinæ, anticæ apice præsertim fusco-nebulosæ, venis fuscescentibus albo punctatis.

Hemerobius apicalis, *Steph. Ill. Brit. Ent. Mand.* vi. 110, 17.

a. England.

30. Hemerobius punctatus.

Ochraceo-rufus; prothoracis latera picea; alæ opalinæ, anticæ venis longitudinalibus albis fuscescente punctatis, transversis fuscis immaculatis.

Hemerobius punctatus, *Leach*, *MSS. Steph. Ill. Brit. Ent. Mand.* vi. 111, 18.

a. England.

31. Hemerobius crispus.

Testaceus; thoracis latera et abdomen saturatiora; alæ opalinæ angustæ, anticæ fuscescente maculatæ venis transversis fuscis, posticæ immaculatæ.

Hemerobius crispus, *Curtis?* *Steph. Ill. Brit. Ent. Mand.* vi. 112, 23.

a. England. Presented by F. Walker, Esq.
b, *c*. North America. Presented by the Entomological Club.
d, *e*. Nova Scotia. From Lieut. Redman's collection.

32. Hemerobius stigma.

Testaceus; antennæ fusco annulatæ; pedes pallidi; abdomen piceum; alæ hyalinæ, fusco-lutescentes, stigmate rufo-fusco, venis fuscis albido punctatis.

Hemerobius stigma, *Steph. Ill. Brit. Ent. Mand.* vi. 112, 22.

a. England. Presented by J. C. Dale, Esq.
b. England.

33. Hemerobius elegans.

Atro-piceus, nitidus; abdomen rufo-piceum; pedes pallidi; alæ abbreviatæ fusco-hyalinæ, anticæ albo perlepide irroratæ, venis fuscis immaculatis.

Hemerobius elegans, *Steph. Ill. Brit. Ent. Mand.* vi. 114, 27.
England.

34. Hemerobius Marshami.

Piceus, nitidus; abdomen pallidius; alæ abbreviatæ rotundatæ fusco-hyalinæ, anticæ concinne albo punctatæ fasciis duabus fuscescentibus, venis fuscis immaculatis.

Hemerobius Marshami, *Steph. Ill. Brit. Ent. Mand.* vi. 114, 28.
H. elegans, var. ?

a. England. Presented by J. C. Dale, Esq.
b. England.

35. Hemerobius obliteratus.

Testaceus; antennæ fuscæ, albido annulatæ, corpore multo longiores; pedes pallidi; alæ subhyalinæ, anticæ fusco vix nebulosæ, venis testaceis fusco-guttatis.

Testaceous: antennæ brown, much longer than the body; each joint with a whitish band at the base; apical joints wholly dark brown; first joint testaceous: legs pale testaceous: wings subhyaline; veins pale testaceous: fore-wings almost imperceptibly mottled with very pale brown; veins slightly dotted with brown: two incomplete series of gradate veinlets which are slightly clouded: gradate veinlets of the hind-wings incomplete and irregular. Length of the body 2 lines; of the wings 6 lines.

a. Georgia. From Mr. Abbot's collection.

36. Hemerobius australis.

Testaceus; antennis pedibusque flavis; alæ subhyalinæ, venis testaceis fusco guttatis et margine postico nebulosis.

Testaceous: antennæ and legs yellow: wings subhyaline; veins pale testaceous; veins of the fore-wings with very numerous

brown dots, slightly clouded with brown along the hind border; two nearly complete series of gradate veinlets which are brown and slightly clouded. Length of the body 2¼ lines; of the wings 7 lines.

a. New Holland. Presented by the Entomological Club.

Group 3.

Radii sector 3us bifurcatus.

37. Hemerobius variegatus.

Fuscus; antennæ ochraceo-rufæ; pedes pallidi; alæ albo-hyalinæ fusco maculatæ et subfusciatæ, venis punctatis.

Hemerobius variegatus, *Fabr. Ent. Syst.* ii. 85. *Turt. Syst. Nat.* iii. 402. *Walck. Faun. Par.* ii. 18, 7. *Steph. Ill. Brit. Ent. Mand.* vi. 113, 25. *Burm. Handb. Ent.* ii. 974, 2. *Wesm. Mon. Hémérob. Belg. Bull. Acad. Roy. Brux.* viii. 214, 1.
Micromus variegatus, *Ramb. Hist. Nat. Ins. Neur.* 417, 3.

a—c. England. Presented by J. C. Dale, Esq.
d—i. England.

Subdiv. 3.

Radii sectores quatuor.

Sect. 1.

Radii sector 3us bifurcatus; 4us trifurcatus.

38. Hemerobius concinnus.

Rufescente-ochraceus; metathorax et abdomen picea; alæ lutescentes, venis pallidioribus nigro punctatis.

Hemerobius concinnus, *Steph. Ill. Brit. Ent. Mand.* vi. 106, 3, pl. 30, f. 3.

a. England. Presented by J. C. Dale, Esq.
b. ——— ♀ From Mr. Children's collection.

Sect. 2.

Radii sector 3us unifurcatus.

39. Hemerobius Pini.

Testaceus; antennæ fusco annulatæ; abdomen nigrum aut piceum; pedes pallidi; alæ hyalinæ, anticæ fusco-lutescentes margine postico saturatiore, punctis fasciisque abbreviatis fuscis.

Hemerobius Pini, *Leach, MSS. Steph. Ill. Brit. Ent. Mand.* vi. 111, 21.

a—d. England.

40. Hemerobius longifrons.

Testaceus, fusco notatus; antennæ fuscæ, annulatæ, corpore longiores; abdomen piceum; pedes pallide testacei; alæ cinereæ, anticæ fasciis tribus obliquis interruptis maculisque marginalibus nigris.

Testaceous, with some brownish marks: antennæ brown, longer than the body; each joint pale testaceous at the base: abdomen pitchy: legs pale testaceous: wings gray: fore-wings with black spots along the borders, and with three oblique interrupted black bands; veins pale testaceous, with numerous black bands; two incomplete series of gradate veinlets. Length of the body 3 lines; of the wings 9 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

41. Hemerobius fasciatus.

Niger; caput et thorax flava, lituris fuscis; alæ albidæ, anticæ fasciis tribus atomisque numerosis nigricantibus, radii sectoribus 1o et 2o unifurcatis.

Hemerobius fasciatus, *Fabr. Ent. Syst.* ii. 85. *Steph. Ill. Brit. Ent. Mand.* vi. 108, 9.

a. England. Presented by J. C. Dale, Esq.
b. England. Presented by F. Walker, Esq.
c—f. England.

Div. 3.

Sub-div. ——— ?

42. HEMEROBIUS ANGULATUS.

Testaceo-flavescens; antennæ nigro annulatæ; alæ abbreviatæ, venis transversis præsertim fuscis fascia angulata saturatiore.

Hemerobius angulatus, *Steph. Ill. Brit. Ent. Mand.* vi. 106, 2.

England.

43. HEMEROBIUS NEMORALIS.

Pallide ochraceus; prothoracis latera nigricantia; abdomen piceo-nigrum, segmentorum marginibus pallidis; alæ albidæ, anticæ fasciis duabus obscuris fuscescentibus.

Hemerobius nemoralis, *Leach, MSS. Steph. Ill. Brit. Ent. Mand.* vi. 110, 15.

England.

44. HEMEROBIUS SUBFASCIATUS.

Pallide ochraceus; thoracis latera abdominisque dorsum fusca; alæ attenuatæ, opalinæ, anticæ fasciis transversis interruptis atomisque fuscis.

Hemerobius subfasciatus, *Steph. Ill. Brit. Ent. Mand.* vi. 111, 19.

England.

45. HEMEROBIUS IRRORATUS.

Ochraceo-rufus; antennæ fusco annulatæ; alæ opalinæ, anticæ crebre fusco-irroratæ, posticæ immaculatæ.

Hemerobius irroratus, *Leach, MSS. Steph. Ill. Brit. Ent. Mand.* vi. 111, 20,

England.

46. Hemerobius intricatus.

Ochraceus; maculæ thoracis abdominisque fuscæ; alæ anticæ cinereo-hyalinæ, venis et venarum intervallis fusco variegatis.

Hemerobius intricatus, *Wesm. Mon. Hémérob. Belg. Bull. Acad. Roy. Brux.* viii. 214, 2.

Belgium.

47. Hemerobius maculatus.

Flavus; vitta macularis utrinque in thoracis dorso et abdomen fusca; alæ albo-hyalinæ, anticæ fusco confertim variegatæ venis nigro punctatis, seriei gradatæ posterioris venulis 1*a et* 2*a furca nulla separatis.*

Hemerobius maculatus, *Wesm. Mon. Hémérob. Belg. Bull. Acad. Roy. Brux.* viii. 215, 4.

Belgium.

48. Hemerobius ochraceus.

Ochraceus; alæ concolores, venis crebre nigro punctatis.

Hemerobius ochraceus, *Wesm. Mon. Hémérob. Belg. Bull. Acad. Roy. Brux.* viii. 217, 8.

Belgium.

49. Hemerobius limbatus.

Luteus; abdomen fuscum; alæ subcinereo-hyalinæ, anticæ disco nebulis limboque lato luteis, venis nigro punctatis.

Hemerobius limbatus, *Wesm. Mon. Hémérob. Belg. Bull. Acad. Roy. Brux.* viii. 215, 5.

Belgium.

50. Hemerobius affinis (Nomen bis lectum).

Flavus; vitta macularis utrinque in thoracis dorso et abdomen fusca; alæ albo-hyalinæ, anticæ cinereo parce variegatæ venis fusco punctatis, venularum serie gradata priore septenaria.

Hemerobius affinis, *Wesm. Mon. Hémérob. Belg. Bull. Acad. Roy. Brux.* 216, 6.

Belgium.

51. Hemerobius conspersus.

Fuscus; antennis annulatis pedibusque pallidis; alæ anticæ fusco variegatæ, venis nigris albo punctatis, sectore tertio quater-furcato. Long. alar. 9 lin.

Hemerobius conspersus, *Burm. Handb. Ent.* ii. 974, 6.

Germany.

52. Hemerobius cylindripes.

Pallide ochraceus; tibiis omnibus cylindricis; alarum anticarum venis nigro punctatis, venarum intervallis nebulis creberrimis cinereis.

Hemerobius cylindripes, *Wesm. Mon. Hémérob. Bely.* 16, 10. *Bull. Acad. Roy. Brux.* viii. 218, 10.

Hemerobius hirtus, *Fabr. Sp. Ins.* i. 393, 7. *Mant. Ins.* i. 247, 9; *Ent. Syst.* ii. 84, 10. *Deg. Ins.* ii. 2, 70, 2, pl. 22, f. 4, 5. *Gmel. ed. Syst. Nat.* i. 5, 2640, 6. *Schr. Faun. Boic.* 71, 191, 1928. *Rossi, Faun. Etrusc.* ii. 15, 686. *Oliv. Enc. Méth.* vii. 61, 13. *Petagn. Ins. Calabr.* i. 336, 5. *Burm. Handb. Ent.* ii. 975, 7.

Europe.

53. Hemerobius lineosus.

Obscure rufescens; antennæ rufo-flavæ; prothorax transverse sulcatus, fusco maculatus; tibiæ posticæ longissimæ; alæ vittis fasciisque fuscescentibus.

Micromus lineosus, *Ramb. Hist. Nat. Ins. Neur.* 416, 1.

54. Hemerobius tendinosus.

Rufo-fuscus; alæ semihyalinæ, fasciis apud venulas fuscis.

Micromus tendinosus, *Ramb. Hist. Nat. Ins. Neur.* 417, 3.

Europe.

This Hemerobius, and probably some others here enumerated, are identical with species previously characterized, but are not easily recognized by the descriptions.

55. Hemerobius fallax.

Flavus, villosus, maculis obscure rufis ; antennæ flavescentes ; pedes pallidi ; alæ anticæ hyalinæ, venis rufescentibus, venulis transversis nigro marginatis.

Mucropalpus fallax, *Ramb. Hist. Nat. Ins. Neur.* 422, 4.

Sardinia.

56. Hemerobius pygmæus.

Minutus, rufo-fuscus ; caput nigricans ; pedes pallidi ; alæ anticæ fusco subcinereæ vel flavescentes, fusco maculatæ, venulis transversis fusco marginatis.

Mucropalpus pygmæus, *Ramb. Hist. Nat. Ins. Neur.* 422, 5.

South France.

57. Hemerobius obscurus.

Obscure rufescens ; caput antice nigricans ; antennæ fuscæ, annulatæ ; pedes testacei ; alæ latæ, fuscescentes, immaculatæ, venis nigro punctatis.

Mucropalpus obscurus, *Ramb. Hist. Nat. Ins. Neur.* 423, 6.

France.

58. Hemerobius parvulus.

H. lutescenti *similis, minor, obscurior, nigricans, rufescente-flavo varia ; palpi nigri, apice albidi ; antennæ fuscæ ; prothorax flavo vittatus ; abdomen flavo-fuscum ; pedes pallidi ; alæ anticæ subhyalinæ, fasciis sinuatis indistinctis fuscis.*

Mucropalpus parvulus, *Ramb. Hist. Nat. Ins. Neur.* 422, 3.

Sardinia.

59. Hemerobius distinctus.

Flavescens, nigro varius, H. lutescenti *similis paullo major ; frons nigra ; vertex nigro et prothorax trivittati ; abdomen nigrum ; pedes pallidi, tibiis anterioribus nigro maculatis, posticis longissimis subarcuatis ; alæ anticæ fusco variæ, punctatæ, venulis transversis externis quinque.*

Mucropalpus distinctus, *Ramb. Hist. Nat. Ins. Neur.* 421, 2.

South Spain.

Div. 4.

Alæ sectoribus radii venulisque gradatis nullis.

Hemerobius, p., *Fabr.*; *Steph.*
Sisyra, *Burm. Handb. Ent.* ii. 975.

Palporum maxillarium articulus ultimus penultimo quadruplo longior. Antennæ moniliformes. Unguiculi tenues.

60. HEMEROBIUS FUSCATUS.

Piceus; pedes testacei; alæ fusco-hyalinæ, nitidissimæ, venis atro-fuscis, ramo sectoris 1o ter furcato.

Hemerobius fuscatus, *Fabr. Ent. Syst.* ii. 84, 11; *Deg. Ins.* ii. 713, 3, pl. 22, f. 8—11. *Turt. Syst. Nat.* iii. 402. *Walck. Faun. Paris.* ii. 17, 5. *Latr. Hist. Nat. Ins.* xii. 38, 5. *Steph. Ill. Brit. Ent. Mand.* vi. 114, 29, pl. 30, f. 4.
Sisyra fuscata, *Burm. Handb. Ent.* ii. 976, 1. *Wesm. Mon. Hémérob. Belg.* ii. 1. *Bull. Acad. Roy. Brux.* viii. 213, 1. *Ramb. Hist. Nat. Ins. Neur.* 416.
Hemerobius niger, *Retz.* 59, 199. *Oliv. Enc. Méth.* vii. 64, 26.
Larva? Branchiostoma Spongillæ, *Westw. Trans. Ent. Soc.* iii. 105, pl. 8.

a, *b*. England. Presented by J. C. Dale, Esq.
c, *d*. England.

61. HEMEROBIUS NITIDULUS.

Testaceus; antennæ fuscæ; pedes pallidi; alæ cinereo-hyalinæ, nitidulæ, venis obscurioribus.

Hemerobius nitidulus, *Fabr. Ent. Syst.* ii. 83. *Turt. Syst. Nat.* iii. 401. *Steph. Ill. Brit. Ent. Mand.* vi. 114, 30.

a—*e*. England. Presented by J. C. Dale, Esq.

62. Hemerobius confinis.

Testaceo-fuscus; antennæ piceæ; pedes testacei; alæ fuscescente-hyalinæ immaculatæ nitidæ.

Hemerobius confinis, *Steph. Ill. Brit. Ent. Mand.* vi. 115, 31.

a, England. Presented by J. C. Dale, Esq.
b—d. England.

63. Hemerobius nigripennis.

Fuscus; alæ concolores; pedes testacei.

Sisyra nigripennis, *Wesm. Mon. Hémérob. Belg.* ii. 2. *Bull. Acad. Roy. Brux.* viii. 213, 2.

Belgium.

64. Hemerobius morio.

Totus niger, pedibus concoloribus; ramo sectoris 1a bis furcato.

Sisyra morio, *Burm. Handb. Ent.* ii. 976, 9.

Germany.

65. Hemerobius vicarius.

Ferrugineus, robustus; antennæ pallidæ, moniliformes; abdomen obscurum; pedes testacei; alæ fuscæ.

Ferruginous, stout: antennæ moniliform, pale ferruginous, occasionally black towards the base: abdomen dark ferruginous: legs testaceous: wings brown; fore-wings darker than the hind-wings; veins dark brown; no sectors of the radius, nor series of gradate veinlets. Length of the body 1⅓ line; of the wings 4½ lines.

a, *b*. Georgia. From Mr. Abbot's collection.

Div. ——— ?

66. HEMEROBIUS DIPTERUS.

Fuscus, pedibus alisque pallidis; alæ anticæ fusco conspersæ, venis transversis infuscatis; alæ posticæ minimæ. Long. ½ lin.

Hemerobius dipterus, *Burm. Handb. Ent.* ii. 973, 1.
Germany.

Genus 7. DROMOPHILA.

Ocelli tres, remoti. Antennæ filiformes, crassæ. Tarsi unguibus duabus acutis onychiisque bipartitis. Alarum posticarum rudimenta.

Dromophila, *Heyden, Ent. Zeit. Stett.* xi. 83.

1. DROMOPHILA MONTANA.

Nigro-fusca, nitens, abdominis lateribus pedibusque flavis.

Dromophila montana, *Heyden, Ent. Zeit. Stett.* xi. 83.
Germany.

Genus 8. CONIORTES.

Palpi labiales 3-articulati, securiformes. Tarsi 5-articulati. Alæ inæquales, undique venis corneis expansæ.

Coniortes, *Westw. Proc. Ent. Soc.* 1834.
Coniopteryx, *Haliday, Curt. Brit. Ent.* xi. pl. 528.
Coniopterygides et Coniopteryx, *Burm. Handb. Ent.* ii. 771. *Ramb. Hist. Nat. Ins. Neur.* 315.
Coniopterygidæ, *Newman.*
Hemerobius, p., *Vill.*
Phryganea, p., *Fabr.*
Malacomyza, *Wesm.*

1. Coniortes parvulus.

Margaritaceo-cinerea, opaca; antennæ corpore non longiores; abdomen rufo-ochraceum; alæ posticæ mediocres.

Hemerobius parvulus, *Vill. Ent. Linn.* iii. 56, 25. *O. F. Müll. Faun. Friedr.*

Phryganea alba, *Fabr. Ent. Syst. Suppl.* 201, 30, 31.

Coniopteryx tineiformis, *Curt. Brit. Ent.* xi. pl. 528, 1. *Steph. Ill. Brit. Ent. Mand.* vi. 116, 1. *Burm. Handb. Ent.* ii. 771, 1, *Ramb. Hist. Nat. Ins. Neur.* 316.

Malacomyza lactea, *Wesm. Bull. Acad. Sci. &c. Brux.* iii. 166, pl. 6, f. 2.

a—c. England. Presented by J. C. Dale, Esq.

2. Coniortes aleyrodiformis.

Margaritaceo-alba, opaca; antennæ corpore longiores; abdomen piceum; alæ posticæ mediocres.

Coniopteryx aleyrodiformis, *Steph. Ill. Brit. Ent. Mand.* vi. 116, 2.

England.

3. Coniortes psociformis.

Margaritaceo-alba, opaca; antennæ corpore multo longiores; alæ posticæ parvæ.

Coniopteryx psociformis, *Curt. Brit. Ent.* xi. pl. 528, 2. *Steph. Ill. Brit. Ent. Mand.* vi. 117, 3. *Burm. Handb. Ent.* ii. 772, 2. *Ramb. Hist. Nat. Ins. Neur.* 316.

a, b. England.

4. Coniortes aphidiformis.

Farinosa, C. tineiformi *similis; alæ posticæ brevissimæ.*

Coniopteryx aphidiformis, *Ramb. Hist. Nat. Ins. Neur.* 316.

Fam. 3. MYRMELEONITES.

Os non rostriforme. Antennæ plerumque clavatæ. Pedes similes.

Myrmeleonides, *Latr.*
Myrmeleonidæ, *Leach ; Steph. ; Westw.*
Myrmeleonina, *MacLeay.*
Myrmeleontides et Ascalaphides, *Ramb. Hist. Nat. Ins. Neur.* 338.
Myrmecoleontidæ, *Burm. Handb. Ent.* ii. 988.
Myrmeleontina, *Newman.*

Genus 1. MYRMELEON.

Antennæ breves, clavatæ vel subclavatæ, vel filiformes. Corpus longum, gracile.

Myrmeleon, *Linn. ; Fabr. ; Geoffr. ; Gmel. ; Barb. ; Stew. ; Turt. ; Wood ; Latr. ; Oliv. ; Panz. ; Ramb.*
Hemerobius, p., *Berk.*
Formicaleo, *Leach ; Guilding.*
Myrmecoleon, *Burm.*
Myrmeleontidæ, *Newman.*

Div. I.

Alæ integræ.

Subdiv. 1.

Alæ posticæ anticis plus maculatæ.

Palpares, *Ramb. Hist. Nat. Ins. Neur.* 365.

Labrum quadrilateral, slightly notched: maxillæ hardly broad at the base, fringed with very thick-set hairs; maxillary palpi with the penultimate joint shorter than the last, the latter widening a little towards the tip, which is abruptly truncated, slightly depressed, almost notched; labial palpi much longer, second joint slender, sometimes at least as long as the preceding; last joint slender, subclavate: spurs at the tips of the hind-femora always longer than the first joint of the tarsi, straight or slightly bent; four first joints of the tarsi very short, almost equal in length, not together longer than the fifth: wings almost always covered with more or less large spots which are often numerous; costal space with only one row of arcolets: hind-wings always more deeply and more largely spotted than the fore-wings; hind-wings of the male having at their articulation

behind a little dilatation furnished at its tip with a little tuft of hairs forming a compact mass and fitted to a lateral cavity of the hind part of the metathorax.

1. Myrmeleon gigas.

Luteus; abdomine infuscato, vitta dorsi media nigra; pedes obscure castanei; alæ fusco maculatæ, maculis flavo venosis.

Myrmeleon gigas, *Dalm. Analect. Entom.* 88, *(annot.)* 1. *Burm. Handb. Ent.* ii. 998, 25.
Myrmeleon libelluloïdes, var. *Drury, Int.* iii. pl. 41.
Palpares gigas, *Ramb. Hist. Nat. Ins. Neur.* 366, 1.

Testaceous, with a black dorsal stripe: prothorax with a pitchy stripe on each side: abdomen dark testaceous: legs ferruginous: wings limpid, with a very slight rosy tint which is most distinct towards the truncated tips: fore-wings with a row of brown spots along the costa, and with four interrupted oblique brown bands which are composed of large spots: hind-wings as long as the fore-wings, with five brown bands, first much interrupted; second dilated; third and fourth connected in the middle and on the hind border; fifth apical, interrupted, connected on the hind border with the fourth.

This and the following species are distinguished from all the others by the great breadth of the marginal region towards the truncated tips of the wings.

a—c. Sierra Leone. Presented by the Rev. D. F. Morgan.

2. Myrmeleon contrarius.

Testaceus; vertex nigro maculatus; palpi ferruginei; antennæ nigræ; thorax nigro trivittatus; abdomen apicem versus piceum; pedes picei, tarsis nigris; alæ latæ, subacuminatæ, anticæ fusco marginibus guttatæ et apud discum quadrifasciatæ; posticæ fusco trifasciatæ et unistrigatæ.

Testaceous, clothed with pale hairs: vertex with a slight longitudinal furrow, and with two bands of black spots; a black spot behind the hind band: palpi ferruginous: antennæ black: thorax with three black stripes: abdomen darker than the thorax, pitchy along half the length from the tip, much shorter than the wings: legs pitchy, stout; tarsi black; spurs as long as the three first

joints of the tarsi: wings limpid, obtusely pointed at the tips, widened convex and slightly undulating along the hind border like those of *M. gigas*; stigma very indistinct, hardly coloured; veins whitish, except where they are coloured by the brown of the wings; slightly ciliated; subcostal areolets simple, their veins with a few forks towards the stigma; marginal region very broad at the tips and along the adjoining part of the hind border: fore-wings dotted with brown, tinged here and there with pale brown, especially along the hind borders towards the tips; some brown spots along the subcostal region; four oblique dark brown bands on the disk; first much interrupted in the middle, and with a spot between it and the base; second extending nearly to the hind border; third shorter; fourth interrupted in the middle, its hind part blending with the pale brown tinge of the wing: hind-wings with three dark brown bands; first irregular towards the hind border, emitting an interrupted branch towards the hind border of the first; third apical, interrupted in front; some brown dots towards the base along the subcostal region and along the hind border; an oblique blackish streak on the hind border along the post-costa and the branch of the cubitus; disks of some of the areolets in the bands more or less hyaline, but less so than in the fore-wings; longitudinal veins pitchy towards the base; transverse veinlets of the fourth band bordered with white in all the wings. Length of the body 24 lines; of the wings 60 lines.

a. Ceylon. Presented by R. Templeton, Esq.

3. MYRMELEON SOLLICITUS.

Testaceus; caput piceo varium, facie flava; palpi nigri; thorax nigro trivittatus; abdomen ferrugineum, subtus piceum; pedes nigri, femoribus subtus piceis; alæ limpidæ, sat latæ, anticæ fusco guttatæ et e maculis fuscis trifasciatæ; posticæ fusco quadrifasciatæ.

Testaceous; vertex with a short pitchy stripe behind and with a curved pitchy spot on each side; face yellow; palpi black: thorax with three black stripes, which are irregular on the mesothorax and on the metathorax: prothorax narrower in front, broader than long: abdomen ferruginous, pitchy beneath except towards the tip: legs black, stout; femora pitchy beneath; wings limpid, rather broad, in structure like those of *M. inclemens*, rounded at the tips: fore-wings sprinkled with brown dots towards the base, along the hind border and at the tips; some larger brown spots in the disk form three short interrupted and irregular oblique brown bands, one of them

very near the tip; stigma yellow; veins whitish; subcostal areolets simple, with a few brown spots which increase successively in size towards the stigma, or two of their veins forked towards the stigma: hind-wings not narrower and hardly shorter than the fore-wings, without spots except a few along the hind borders and at the tips, but with four irregular slightly oblique brown bands which are not connected with each other and do not reach the hind border; the disks of their areolets nearly hyaline. Length of the body 27 lines; of the wings 68 lines.

a. ———? Voyage of the Blonde. Presented by Capt. Lord Byron.

4. MYRMELEON INCLEMENS.

Testaceus, nigro vittatus; palpi et pedes ferruginei; abdomen piceum, testaceo varium; alæ limpidæ, sat latæ, apice rotundatæ; anticæ subfusco-nebulosæ et fusco guttatæ, nec non apud discum e maculis fuscis unistrigatæ et trifasciatæ; posticæ fasciis quatuor apud medium connexis purpureo-fuscis.

Perhaps a variety of *M. cephalotes*. Testaceous, with a black stripe from the vertex to the metathorax: head black about the base of the antennæ and with a blackish band beneath: palpi ferruginous: abdomen pitchy, partly dark testaceous: legs ferruginous: wings limpid, rather broad, in structure like those of *M. libelluloïdes*, rounded at the tips: fore-wings slightly clouded here and there with pale brown, dotted with brown towards the base and towards the tips and along the hind border; some larger brown spots in the disk form three incomplete oblique bands; there is also a stripe of small brown spots in the disks; stigma yellow; veins testaceous, here and there whitish; subcostal areolets simple, with brown dots towards the base, and with brown spots towards the stigma; a few of their veins forked towards the stigma: hind-wings shorter but not narrower than the fore-wings, without spots except a few along the hind border, but with four irregular oblique purplish brown bands, which are connected with each other in the middle. Length of the body 24 lines; of the wings 68 lines.

a. ———?

b, *c*. Port Natal. From Mr. Stevens' collection.

5. Myrmeleon cephalotes.

Cinereus; capite thoraceque vitta media obsoleta fusca; alis ovato-lanceolatis, albo-hyalinis, punctis maculisque nigris.

Myrmeleon cephalotes, *Klug, Symb. Phys. dec.* 4, 1, pl. 35, f. 1.
Palpares cephalotes, *Ramb. Hist. Nat. Ins. Neur.* 368, 3.

The Egyptian species described by Klug may be distinct from the Senegal *M. cephalotes* of Rambur, which more resembles the insect here described.

Yellow: head with a pitchy stripe which is dilated between the eyes, and with another beneath the antennæ: thorax with three pitchy stripes; mesothorax and metathorax with some pitchy streaks on each side of the dorsal stripe: abdomen testaceous, pitchy towards the tip and beneath: legs pitchy: fore-wings with three oblique interrupted brown bands, and with numerous brown dots along the costa, towards the base, at the tips and about the hind border: hind-wings with four brown bands; first, second and third connected together in the middle, forked on the hind border of the wing; first emitting a branch from its middle towards the base; fourth apical, containing two hyaline spots.

a, b. Congo. Presented by Sir J. Richardson.

6. Myrmeleon furfuraceus.

Rufo-flavus, nigro vittatus; caput magnum, vertice gibboso; palpi rufescentes, labiales articulo 3o nigro maculato; abdomen fuscum, flavo bivittatum; pedes rufescentes; alæ latæ, maculis guttisque rufescentibus.

Palpares furfuraceus, *Ramb. Hist. Nat. Ins. Neur.* 373, 10.

Like *M. libelluloïdes* in structure. Testaceous, with a pitchy stripe: antennæ black: abdomen pitchy: legs ferruginous: wings spotted, much like those of *M. pardus*.

? *a, b.* Congo. Presented by Sir John Richardson.

7. Myrmeleon patiens.

Piceus, robustus; caput antice fulvum, vertice fulvo maculato; antennæ nigræ; thorax fulvo varius; abdomen maris supra ferrugineum; pedes ferruginei, tibiis apud medium tarsisque nigris; alæ subangustæ, fusco quinquefasciatæ, anticæ marginibus posticis et apicibus fusco-nebulosis guttisque obscurioribus.

Pitchy, stout, like *M. libelluloïdes* in structure. Front and face tawny; some tawny spots on the vertex: palpi and anteunæ black: prothorax narrower in front, broader than long, partly tawny along the transverse middle ridge and along the fore border: segments of the mesothorax and of the metathorax with tawny spots and borders: abdomen of the male longer than that of the female, ferruginous above except at the tip: appendages short: legs stout, ferruginous; tibiæ in the middle and tarsi black: wings limpid, rather narrow: fore-wings sprinkled with numerous brown dots which are mostly along the hind borders and at the tips, these parts are also clouded with pale brown; some large spots in the disk form five irregular incomplete and slightly oblique bands, the disks of whose areolets are more or less hyaline; stigma yellowish; veins testaceous; discal areolets simple, with brown dots towards the base and with brown spots towards the stigma; one or two of their veins by the stigma occasionally forked: hind-wings shorter, but not narrower than the fore-wings, without spots except a few along the hind border, but with five bands, of which all except the last are occasionally more or less connected with each other in the middle. Length of the body 22—24 lines; of the wings 48—60 lines.

a—*d*. North India. From Mr. Stevens' collection.
e. North Bengal. From Miss Campbell's collection.

8. Myrmeleon libelluloides.

Testaceus; vitta verticis et prothoracis media fusca; abdomine supra trivittato; femora rufa; alæ fusco maculatæ, maculis unicoloribus fusco venosis; abdomen maris alis brevius cercis longissimis instructum, fœminæ alis dimidiis vix longius cercis minutissimis.

Hemerobius libelluloïdes, *Mus. Lud. Ubr.* 401.
Myrmeleon libelluloïdes, *Linn. Syst. Nat.* ii. 913, 1. *Drury, Ins.* ii. pl. 46, f. 1. *Fabr. Sp. Ins.* i. 398, 1. *Mant. Ins.* i. 249, 1;

Ent. Syst. ii. 92, 1. *Gmel. ed. Syst. Nat.* i. 5, 2642, 1. *Deg. Ins.* iii. 365, 2, pl. 27, f. 9. *Rai, Ins.* 53. *Petiv. Gazoph.* 6, pl. 3, f. 1. *Sulz. Hist. Nat. Ins.* pl. 25, f. 3. *Oliv. Enc. Méth.* viii. 121, 1. *Rossi, Faun. Etrusc.* ii. 14; *ed. Illig.* ii. 17. *Descript. de l'Egypte, Neur.* pl. 3, f. 4. *Lam. Hist. Nat. Anim. Invert.* ix. 210, 3. *Dalm. Analect. Ent.* 88, (*annot.*) 2. *Charp. Hor. Ent.* 51, 52. *Burm. Handb. Ent.* ii. 698, 24. *Brullé, Exped. Scient. Morée*, 216, 556.

Palpares libelluloïdes, *Ramb. Hist. Nat. Ins. Neur.* 367, 2.

Myrmeleon papilionoïdes, Fem.? *Klug, Symb. Phys. dec.* 4, 2, pl. 35, f. 2.

a, *b*. Salerno and Amalfi. Presented by M. Pierret.
c—*e*. Albania. Presented by W. Wilson Saunders, Esq.
f, *g*. Marseilles. From Mr. Walker's collection.
h, *i*. Tunis. From Mr. Fraser's collection.
j. ——— ? From Mr. Milne's collection.
k, *l*. ——— ? From Mr. Children's collection.
m, *n*. ——— ?

9. Myrmeleon speciosus.

Rufo-fuscus; vertice toto nigro; prothorace sulphureo limbato; femora basi rufa; alæ angustiores, fusco maculatæ, maculis anticarum intus cinereis fusco venosis; abdomen maris alis longius supra rufo-testaceum apicem versus nigrum, fœminæ alarum longitudine itidem coloratum.

Myrmeleon speciosum, *Linn. Syst. Nat.* ii. 912. *Roes. Ins.* iii. pl. 21, f. 1. *Oliv. Enc. Méth.* viii. 121, 2. *Charp. Hor. Ent.* 51. *Burm. Handb. Ent.* ii. 998, 23.

Myrmeleon leopardus, *Dalm. Analect. Ent.* 89, (*annot.*) 3.

Palpares speciosus, *Ramb. Hist. Nat. Ins. Neur.* 370, 6.

Like *M. libelluloïdes* in structure.

a, *b*. South Africa. Presented by F. Angas, Esq.
c. ——— ? Presented by J. W. Evans, Esq.
d—*g*. Cape. Presented by R. W. Townsend, Esq.
h—*k*. Cape. From the Hardwicke bequest.
l. Cape. From Mr. Argent's collection.
m—*o*. Port Natal. From M. Gueinzius' collection.
p, *q*. Port Natal. From Dr. Krauss' collection.
r, *s*. ——— ? From Mr. Milne's collection.
t. Cape.
v—*x*. ——— ?

10. Myrmeleon tigris.

M. libelluloïdis *magnitudine; alæ angustiores lanceolatæ, margine postico fusco non punctato; antice striato maculatæ; caput flavum, macula inter antennas, punctoque verticis nigris; pedes flavi, tarsis nigris.*

Myrmeleon tigris, *Dalm. Analect. Ent.* 88, 99.
Palpares tigris, *Ramb. Hist. Nat. Ins. Neur.* 374, 12.

Like *M. libelluloïdes* in structure; wings a little more angular.

a, *b*. Sierra Leone. Presented by the Rev. D. F. Morgan.

11. Myrmeleon infimus.

Testaceus; vertex nigro bimaculatus; palpi ferruginei, apice picei; thorax nigro trivittatus; pedes nigri, tibiis supra testaceis; alæ limpidæ, sat amplæ, apice non angulatæ, fusco maculatæ, anticæ vix bifasciatæ, posticæ quinquefasciatæ.

Testaceous, stout, clothed with whitish hairs: head darker than the thorax; vertex with a slight longitudinal furrow, and with a black spot on each side: palpi ferruginous with pitchy tips: thorax with three black stripes: prothorax much narrower in front, not broader than long, with a transverse furrow in the middle; abdomen much shorter than the wings: legs black, stout; tibiæ testaceous above; spurs curved, longer than the first joint of the tarsi: wings limpid, moderately long and broad, rounded and not angular at the tips; stigma yellowish; veins pale testaceous except in the brown parts, slightly ciliated; disks of the areolets more or less hyaline in some of the brown marks, transverse veinlets bordered with white in others; subcostal areolets simple, their veins with one or two forks by the stigma: fore-wings with dark brown marks along the fore border and on one-third of the length from the base, and with larger and paler brown spots along the hind border and about the tips; two oblique brown bands extending from the subcosta to the disk, the first about half the breadth of the wing, the second longer but interrupted and forming three spots: hind-wings shorter but not narrower than the fore-wings, with a few dark brown spots along the subcosta, and with five dark brown bands; first shortened behind, second, third and fourth slightly undulating, forked and accompanied by some brown spots near the hind border; fifth apical, including a little spot above the tip: alulæ small. Nearly allied to *M. pardus*. Length of the body 23 lines; of the wings 56 lines.

a. North India. From Mr. Stevens' collection.

12. Myrmeleon pardus.

Flavus, M. libelluloïdis *magnitudine; palpi labiales rufescentes; thorax fusco varii.*

Palpares pardus, *Ramb. Hist. Nat. Ins. Neur.* 375, 15.

Testaceous: head black about the base of the antennæ which are black: prothorax in some cases with a black stripe: disk of the thorax pitchy: abdomen pitchy; hind borders of the segments yellow: legs tawny; tarsi black: wings limpid, rounded at the tips; subcostal areolets simple, with some forked veins towards the stigma, a row of quadrate spots above the costa: fore-wings with numerous little brown dots at the base and along the hind border, and with a few large brown spots in the disk; spots at the tip forming an undulating band: hind-wings as long and almost as broad as the fore-wings, with a few large spots in the disk and more smaller ones along the hind border.

a, b. East Indies. Presented by Lady Amherst.
c. East Indies. From the Hardwicke bequest.
d. North Bengal. From Miss Campbell's collection.
e—h. North India. From Mr. Stevens' collection.

13. Myrmeleon subducens.

Testaceus; palpi ferruginei, labiales apice picei; antennæ nigræ; thorax fusco trivittatus; pedes nigri, femoribus ferrugineis; alæ hyalinæ, sat longæ, subangustæ, apice vix angulatæ; anticæ fusco guttatæ et disco maculatæ, posticæ fusco maculatæ et quinquefasciatæ.

Testaceous, clothed with whitish hairs: head paler than the thorax; vertex very convex, with a longitudinal furrow; face paler: palpi ferruginous; third joint of the labial palpi pitchy: antennæ black: prothorax and mesothorax with three blackish brown stripes, the lateral stripes dilated on the mesothorax, and each including a testaceous stripe and dot; some brown spots on the disks of the segments of the metathorax: abdomen mutilated, testaceous at the base; legs black; femora dark ferruginous; spurs as long as the two first joints of the tarsi: wings hyaline, rather long and narrow, rounded or very slightly angular at the tips, where the marginal region is broad; stigma yellowish, very indistinct; veins whitish, except in the brown marks, in some of these the transverse veinlets are bordered with white; subcostal areolets simple, the forks of their

veins beginning by the stigma; fore-wings with brown dots which are mostly at the tips, along the hind borders and especially towards the base where they are darkest; an oblique long brown spot in the disk, and beyond a slightly oblique streak, and a spot above it; two brown spots near the tip: hind-wings shorter but not narrower than the fore-wings, with brown spots at the tips and from thence along two-thirds of the hind border, and with five brown bands which do not extend to the hind border; first band irregular and occasionally interrupted; second widened behind; third partly or wholly interrupted; fourth and fifth interrupted: alulæ whitish with black tips. Length of the wings 68 lines.

a. ———? Voyage of the Blonde. Presented by Capt. Lord Byron.

14. Myrmeleon incommodus.

Testaceus; caput nigro vittatum; palpi labiales apice nigri; thorax fusco trivittatus; tarsi nigri; alæ limpidæ, longæ, angustæ, apicibus et marginibus posticis subfuscentibus, fasciisque quinque interruptis fuscis, anticæ strigis tribus basalibus nigricantibus, posticæ guttis basi marginalibus fuscis.

Testaceous, stout, clothed with whitish hairs: vertex very convex, with a broad black stripe and a slight longitudinal furrow: palpi pale testaceous; labial palpi with black tips: antennæ mutilated, testaceous at the base: thorax with three slightly interrupted dark brown stripes: prothorax a little narrower in front, its breadth more than twice its length: abdomen mutilated, testaceous towards the base: legs testaceous, stout; tarsi black; spurs much curved, as long as the two first joints of the tarsi: wings limpid, long and narrow, tinged with pale brown at the tips and about the hind border, especially in the fore-wings, where the brown hue extends along the whole length and on half the breadth except a limpid space on each side of the fork of the radius; stigma indistinct; veins whitish, except on the brown parts where many of the transverse veinlets are bordered with white; longitudinal veins mostly testaceous or pitchy towards the base; disks of many of the areolets in the brown parts more or less hyaline; subcostal areolets simple, with two or three forked veins by the stigma: fore-wings with three blackish basal streaks, one along the costa, the second along the cubitus and its fork, and the third in dots along the hind border; five interrupted brown bands, first and second each forming three spots, first extending to the hind border, third forming three spots and broken towards the hind border into four long slender oblique streaks; fourth and fifth short, the

hind part of each consisting of a longitudinal streak in the disk: hind-wings shorter but hardly narrower than the fore-wings, with some dark brown dots along the cubitus, and along the hind border towards its fork; five dark brown oblique interrupted bands, first shortened in front, connected in the middle with the second, which also extends to the hind border, third, fourth and fifth shortened behind. Length of the wings 62 lines.

a. West Africa. From Mr. Argent's collection.

15. Mymeleon zebratus.

Flavus; palpi nigro maculati; thorax nigro trivittatus; abdomen rufo-flavum, apice obscurius; femora extus obscuriora; tarsi nigri; alæ fusco maculatæ et bifasciatæ, apicibus marginibusque posticis subfuscis.

Palpares zebratus, *Ramb. Hist. Nat. Ins. Neur.* 371, 7.

Var. ? *Testaceus, nigro trivittatus; caput nigro univittatum, facie flava; palpi ferruginei; antennæ nigræ; pedes nigri, femoribus basi ferrugineis, tibiis testaceis apice nigris; alæ albidæ, longæ, apice rotundatæ, anticæ fusco guttatæ et maculatæ, posticæ fusco quadrisubfasciatæ.*

Testaceous, stout, covered with whitish hairs: head with a black stripe; face yellow: palpi ferruginous: antennæ black, subclavate, about half the length of the thorax: thorax and abdomen with three black stripes: abdomen much shorter than the wings: legs black, stout; femora ferruginous at the base; tibiæ testaceous with black tips: wings whitish, long, not pointed nor angular; stigma yellow; veins mostly pale; subcostal areolets simple, with one or two forked veins by the stigma: fore-wings sprinkled with numerous brown dots which are most prevalent along the hind borders and at the tips; some larger and darker brown spots along the cubitus, and between the forks of the sector of the radius, and near the tips: hind-wings as broad and almost as long as the fore-wings, with brown dots along the subcosta, and with a row of brown spots of various size along the hind border, from one-third of the length to the tip; some large dark brown spots in the disk forming four irregular and imperfect brown bands, in which several of the veins and of the disks of the areolets are more or less distinctly white. Length of the body 21 lines; of the wings 50 lines.

a. North India. From Mr. Stevens' collection.

16. Myrmeleon expertus.

Testaceus; vertex piceo bimaculatus; antennæ piceæ, basi ferrugineæ; thorax piceo vittatus; abdomen fœminæ apicem versus piceum; tarsi picei; alæ limpidæ, subamplæ, apice vix angulatæ, fusco maculatæ, anticæ fasciis duabus apicalibus connexis fuscis, posticæ semifasciatæ.

Testaceous, rather stout, clothed with whitish hairs: head pitchy about the base of the antennæ and with two pitchy spots on the vertex: palpi testaceous: antennæ pitchy, ferruginous towards the base: thorax with a slight pitchy stripe: prothorax a little narrower in front; its breadth more than twice its length: abdomen of the female pitchy towards the tip, shorter than of the male: appendages of the male curved, armed with black spines: legs testaceous, stout; tarsi pitchy; spurs pitchy, as long as the three first joints of the tarsi: wings limpid, moderately long and broad, indistinctly angular at the tips; stigma very indistinct, hardly coloured: veins whitish, except in the brown parts, whose areolets are here and there paler; subcostal areolets simple, with a few forked veins near the stigma; a row of subquadrate brown spots along the subcosta: fore-wings with numerous brown dots except near the fore border and at the tips; three larger brown spots along the fore part of the disk, first often divided, second short, third long and forming a short band; two brown bands at the tip, first zigzag, united at each end to the second: hind-wings a little shorter and narrower than the fore-wings; two rows of brown spots along the hind border, the inner one imperfect; four brown spots in the disk, the first half the size of the second, the third forming with the fourth an interrupted curved band, two brown spots beyond these, connected with the brown at the tips and occasionally with each other, and thus including a limpid spot. Length of the body 19—20 lines; of the wings 42—50 lines.

a. North India. From Mr. Stevens' collection.
b. ——— ?

17. Myrmeleon radiatus.

Flavescens; vertex fusco fasciatus; thorax vitta dorsali maculisque nigris; abdomen testaceum, apice nigro vittatum; tarsi rufo-fusci; alæ subflavescentes, fusco strigatis.

Palpares radiatus, *Ramb. Hist. Nat. Ins. Neur.* 369, 4, pl. 11, f. 1.
Senegal.

18 Myrmeleon papilionoides.

Pallidus, fusco trivittatus; alis ovatis, fasciis maculisque fuscis.

Myrmeleon papilionoïdes, *Klug, Symb. Phys. dec.* 4, pl. 35, f. 3, mas.

Palpares papilionoïdes, *Ramb. Hist. Nat. Ins. Neur.* 369, 5.

Caput fascia transversa inter oculos maculaque longitudinali media in vertice fuscis: palpi rufo-testacei, articulis apice obscurioribus: antennæ vix thorace breviores, nigræ, basi testaceæ: thorax albido villosus, dorso vitta media et laterali utrinque fusco ferrugineis ornatus, subtus obsolete ferrugineo maculatus: pedes pallide testacei, nigro hispidi, tarsis fusco-ferrugineis: alæ albo-hyalinæ, albido reticulatæ, venis subcostalibus pallide testaceis, antici fasciis duabus reticulatis abbreviatis punctisque numerossimis, postici fasciis abbreviatis totidem maculisque ad marginem externum fuscis: abdomen vittis tribus fuscis ornatum.

Arabia.

19. Myrmeleon manicatus.

Flavus, nigro maculatus; palpi apice nigri; pedes fusco fasciati, tibiis apice tarsisque nigris; alæ subcinereæ, maculis guttisque nigricantibus.

Palpares manicatus, *Ramb. Hist. Nat. Ins. Neur.* 372, 8.

20. Myrmeleon cognatus.

Flavus; palpi rufo-fusci; thorax nigro vittatus; abdomen testaceum, apice nigricans; pedes rufi, tibiis apice tarsisque nigris; alæ subrufescentes, nigro maculatæ et guttatæ.

Palpares cognatus, *Ramb. Hist. Nat. Ins. Neur.* 373, 9.

21. Myrmeleon latipennis.

Rufo-flavus; palpis antennisque nigris; thorax nigro trivittatus; abdomen testaceum; pedes flavi, tibiis apice tarsisque nigris; alæ latissimæ, flavo maculatæ et guttatæ.

Palpares latipennis, *Ramb. Hist. Nat. Ins. Neur.* 374, 11.

Senegal.

22. MYRMELEON HYÆNA

Niger; vertice et prothorace cinereo subglabro, vitta media nigra; thorace reliquo maculato, cinereo-hirto; alæ anticæ fusco conspersæ venis punctatis, posticæ fusco maculatæ venis unicoloribus. Long 21 lin.

Myrmeleon Hyæna, *Dalm. Analect. Ent.* 89, 100.
Myrmecoleon Hyæna, *Burm. Handb. Ent.* ii. 997, 19.
Palpares Hyæna, *Ramb. Hist. Nat. Ins. Neur.* 374, 13.
Sierra Leone.

23. MYRMELEON TESSELLATUS.

Flavus, M. libelluloïdis *magnitudine; antennæ nigræ, basi flavæ; thorax rufo-fusco varius; palpi labiales apice nigro maculati; abdomen rufo-fuscum, flavo trivittatum; femora rufescentia; alæ hyalinæ, fusco reticulatæ.*

Palpares tessellatus, *Ramb. Hist. Nat. Ins. Neur.* 375, 14.
Senegal.

24. MYRMELEON SPECTRUM.

Nigricans, M. libelluloide *minor; labrum flavo maculatum; thorax rufo-fuscus; abdomen basi rufo-maculatum, segmentorum 4 vel 5 marginibus posticis flavis; alæ nigricantes, fasciis duabus maculis guttisque hyalinis.*

Palpares spectrum, *Ramb. Hist. Nat. Ins. Neur.* 376, 16.

25. MYRMELEON VENOSUS.

Niger; prothoracis margine flavo; alæ anticæ hyalinæ, venis longitudinalibus flavo limbatis, transversalibus nigris; alæ posticæ pallide flavæ, fusco maculatæ. Long. 12 lin.

Myrmecoleon venosus, *Burm. Handb. Ent.* ii. 998, 22.
Palpares venosus, *Ramb. Hist. Nat. Ins. Neur.* 376, 17.
Cape.

26. Myrmeleon pardalinus.

Niger; prothoracis et segmentorum abdominalium margine flavo; alæ anticæ fulvæ fusco conspersæ, posticæ flavæ nigro trifasciatæ; fascia media furcata; abdomen maris alarum longitudine cercis mediocribus clavatis. Long. 12 lin.

Myrmecoleon pardalinus, *Burm. Handb. Ent.* ii. 997, 20.
Palpares pardalinus, *Ramb. Hist. Nat. Ins. Neur.* 377, 18.

Var.? *Niger, gracilis; caput antice et subtus flavum; antennæ clavatæ; thoraæ flavo bivittatus; abdomen nigro testaceum; pedes graciles; alæ subluridæ, latæ, breves, apice rotundatæ; anticæ basi apice marginibusque fusco maculatæ, apud medium fusco interrupte bifasciatæ; posticæ maculis nonnullis fasciisque duabus fuscis.*

The insect here described differs much from the preceding species in structure, and in the form of the antennæ, and appears more allied to *M. clavicornis*. Black, slender: head yellow beneath; vertex very convex, with a slight longitudinal furrow; two yellow rings at the base of the antennæ; face yellow: palpi black: antennæ clavate, slender, much shorter than the thorax: thorax with two gilded yellow irregular and interrupted stripes: prothorax a little narrower in front, much broader than long, with a transverse furrow near the hind border and a transverse suture near the fore border: abdomen dark testaceous, tinged with black, much shorter than the wings: legs black, slender; ungues bright red; spurs ferruginous, straight, as long as the two first joints of the tarsus: wings slightly lurid, broad, short, rounded at the tips; stigma white; veins pale testaceous except in the brown parts, ciliated; subcostal areolets simple, a few of their veins forked towards the stigma; marginal region very broad towards the tips of the wings: forewings with dark brown dots on one-third of the length from the base, especially on the subcostal region where they are darkest and most regular; from thence along the borders and at the tips the spots and dots are paler, and there are two paler oblique short and interrupted bands on the disk; hind-wings as long and as broad as the forewings, with some brown dots along less than half the length of the costa from the base, with three or four dots opposite to them near the hind border, with a brown spot in the disk near the latter, with some spots at the tip and from thence along half the length of the hind border, and with two bands across the middle, the first very undulating, the second notched in the middle on the inner side and

tapering towards the hind border. Length of the body 11 lines; of the wings 28 lines.

a. Cape.

27. MYRMELEON CONSPURCATUS.

Niger; prothoracis margine flavo; alæ anticæ fulvæ venis transversis infuscatis, posticæ fuscæ flavo maculatæ.

Myrmecoleon conspurcatus, *Burm. Handb. Ent.* ii. 997, 21.
Palpares conspurcatus, *Ramb. Hist. Nat. Ins. Neur.* 377, 19.
S. Africa.

Subdiv. 2.

Alæ anticæ posticis plus maculatæ. Tibiæ calcaribus valde flexis.

Acanthaclisis, *Ramb. Hist. Nat. Ins. Neur.* 378.

Labium heart-shaped; maxillary palpi with the penultimate joint shorter than the last which is cylindrical and a little attenuated towards the tip; labial palpi much longer, their second joint sometimes as long as the maxillary palpi, last joint also very long, clavate: legs short; spurs on the tips of the tibiæ notched about the middle on the inner side, thence bent almost at a right angle, always much longer than the first and second joints of the tarsi; claws with a prominent, rounded and much bent dilatation at the base: wings more or less spotted, only varied by the different colouring of the veins; hind-wings always less marked than the fore-wings, slightly prolonged, and with a winglet on their hinder base.

The species of this division may be distinguished by their thick bodies, and by their short and narrow wings, in which the subcostal areolets are generally divided.

28. MYRMELEON OCCITANICUS.

Rubicundo-cinereus, albo-hirtus, vitta media nigra; abdomen nigrum, segmentorum marginibus flavis; alarum venæ fusco punctatæ, radius et cubitus fusco fasciati.

Myrmeleon occitanicus, *Vill. Ent. Linn.* iii. 63, 9, pl. 7, f. 10. *Oliv. Enc. Méth.* viii. 122, 5. *Panz. Faun. Ins. Germ.* lix. 4. *Latr. Gen. Crust. et Ins.* iii. 192, 1; *Descript. de l'Egypte, Neur.* pl. 3, f. 5.

Myrmeleon pisanus, *Rossi, Faun. Etrusc.* ii. 14, pl. 9, f. 8.
Myrmeleon pisanum, *Lam. Hist. Nat. Anim. sans Vert.* iv. 210, 1.
Acanthaclisis occitanica, *Ramb. Hist. Nat. Ins. Neur.* 378, 1.
Myrmecoleon pisanus, *Burm. Handb. Ent.* ii. 996, 16.

a. Frejus. From Mr. Walker's collection.
b. South France.
c. Portugal.
d. ——— ?

29. Myrmeleon Bæticus.

M. occitanico *simillimus, capite minore ; palporum labialium articulo 3o longiore graciliore, apice tantum clavato ; thoracis vitta latiore ; pedibus nigro maculatioribus, calcaribus minus arcuatis, alis fusco guttatis vix maculatis.*

Acanthaclisis Bætica, *Ramb. Hist. Nat. Ins. Neur.* 379, 2.

Malaga.

30. Myrmeleon distinctus.

M. occitanico *affinis sed paullo crassior ; antennis longioribus gracilioribus albido annulatis, palporum labialium articulo 3o longiore graciliore, clava apice breviore acuminata, thoracis vittis latioribus, alis obtusioribus, areolis subcostalibus simplicibus.*

Senegal.

Var. aut species altera ? *Pallidior, thoracis vittis angustioribus, abdominis maculis flavicantibus vittas duas fingentibus, alis pallidioribus.*

Acanthaclisis distincta, *Ramb. Hist. Nat. Ins. Neur,* 380, 3.

Mauritius.

Var. ? *Cinereo-ferrugineus, robustus ; caput antice testaceum, vertice nigro ferrugineoque guttato ; antennæ subclavatæ, fuscæ, albo annulatæ ; thorax nigro sexvittatus ; abdomen ferrugineum, piceo testaceoque bivittatum ; pedes testacei, tarsis nigris ; alæ breves, angustæ, subangulatæ, anticæ apice vix notatæ.*

Grayish ferruginous, stout, clothed with white hairs: vertex with a slight longitudinal furrow, with a band of black dots above,

and with some ferruginous dots in front; front face and palpi testaceous; labial palpi brown towards the tips: antennæ subclavate, much shorter than the thorax, with a brown and a white band on each joint: prothorax a little narrower in front, rather broader than long, with six black slender stripes, the innermost pair almost contiguous, forked towards the hind border: mesothorax and metathorax also with six stripes which are more irregular than those of the prothorax: abdomen ferruginous, much shorter than the wings; hind borders of the segments occasionally brown, a pitchy and a testaceous stripe on each side: legs testaceous, stout, with a few black marks; tarsi black; spurs stout, much bent, angular, reddish, with a tooth beneath before the flexure, black towards the tips: wings hyaline, rather short and narrow, slightly angular at the tips; stigma yellowish; veins alternately black and white, slightly ciliated, a few of them slightly clouded in the disks towards the tips; subcostal areolets simple, with the exception of a few of them near the stigma which are divided by transverse veinlets, and are forked in front; marginal region very narrow: hind-wings shorter and narrower than the fore-wings, most of the veins white. Length of the body 16—17 lines; of the wings 42—46 lines.

a. Port Natal. From Mr. Stevens' collection.
b—d. Port Natal. From M. Gueinzius' collection.

31. Myrmeleon Americanus.

Cinereo-fuscus, fronte vittisque duabus dorsi roseo-cinereis; pedes carneo-annulati; alæ hyalinæ maculis fuscis et margaritaceis, venis nunc roseis nunc fuscis. Long. 18—21 lin.

Myrmeleon Americanus, *Drury, Ins. Exot.* i. pl. 46, f. 4.
Myrmecoleon americanus, *Burm. Handb. Ent.* ii 996, 17.
Acanthaclisis Americana, *Rumb. Hist. Nat. Ins. Neur.* 380, 4.

United States.

32. Myrmeleon edax.

Ferrugineus, robustus; caput testaceum, supra piceum; palpi testacei; antennæ subclavatæ, apice supra piceæ; thorax nigro quinquevittatus; abdomen nigrum, maculis lateralibus ventreque testaceis; pedes validi, femoribus supra nigricantibus, tarsis nigro bifasciatis; alæ subhyalinæ, angustæ, breves, apice angulatæ, anticæ nonnunquam nigro notatæ.

Ferruginous, stout, mostly clothed with black hairs: head testaceous: disk of the vertex pitchy: palpi pale testaceous: antennæ ferruginous, subclavate, pitchy above towards the tips, much shorter than the thorax: thorax with five black stripes, the middle one broad and partly subdivided, the others very slender: prothorax much narrower in front, much broader than long: abdomen black, much shorter than the wings, with testaceous spots along each side; under side testaceous: legs ferruginous, stout; femora blackish above; tarsi with two black bands; spurs reddish, bent, dentated beneath, as long as the three first joints of the tarsi: wings subhyaline, narrow, rather short, obtusely angular at the tips; stigma yellowish; veins testaceous, here and there blackish or white; subcostal region very narrow at the base of the wing, narrow and almost linear from thence to the stigma, near which some of the areolets are divided by transverse veinlets, and a few of the veins are forked; marginal region very narrow: fore-wings with a blackish interrupted stripe along the cubitus from the base to the tip of the wing; a blackish spot within the angle formed by the cubitus and its fork; some little blackish marks near the tip of the fore-border, where a few of the forks of the marginal veinlets are slightly clouded: hind-wings shorter and narrower than the fore-wings, without marks, except a single little one by the cubitus at two-thirds of the length and not far from the hind border; veins mostly white.

Var. β. Stripe on the fore-wing almost obsolete, but traceable by some slight marks along its course, so also the spot by the fork of the cubitus.

Var. γ. All the marks of the wings quite obsolete. Length of the body 14—17 lines; of the wings 36—42 lines.

a—d. ——— ? From Mr. Children's collection.
e. ——— ?

33. Myrmeleon brachygaster.

Rufo-cinereus, M. formicario *paullo major; facies flava; prothorax fusco notatus; abdomen breve; pedes hirsutissimi, fusco varii, tarsis nigricantibus; alarum venæ rufescentes fusco variæ.*

Acanthaclisis brachygaster, *Ramb. Hist. Nat. Ins. Neur.* 381, 5.

34. Myrmeleon longicollis.

Acanthaclisis longicollis, *Ramb. Hist. Nat. Ins. Neur.* 381, 6.

Senegal.

Var. ? *Niger, gracilis, subtus testaceus; caput prothorace multo latius, vertice fulvo maculato, facie palpisque testaceis; antennæ subclavatæ, graciles, testaceo annulatæ; thorax testaceo sexvittatus; prothorax longior quam latior, antice angustior; pedes testacei, graciles, nigro varii, tarsis basi apiceque nigris; alæ hyalinæ, amplæ, apice subangulatæ, anticæ fusco notatæ.*

Black, slender, testaceous beneath: head much broader than the prothorax; vertex with three bands of tawny spots; face and palpi testaceous: antennæ black, subclavate, slender, as long as the thorax; joints with testaceous bands increasing in breadth from the tips to the base of the antennæ which they wholly occupy: thorax with six irregular and interrupted testaceous stripes: prothorax narrower in front, longer than broad, with the transverse furrow at one-third of the length from the fore border: abdomen about half the length of the wings: legs testaceous, slender; tarsi pale testaceous, black at the base and at the tips; fore-femora and anterior tibiæ with some black marks; spurs ferruginous, much curved, angular, dentate beneath, longer than the three first joints of the tarsi: wings hyaline, ample, slightly angular at the tips; stigma whitish, with a small adjoining brown spot in the fore-wings; veins alternately black and white; second sector of the radius undulating, emitting numerous forks; subcostal region very narrow at the base of the wing, areolets divided by transverse veinlets from near the base to the stigma, veins mostly forked from one-fourth of the length to the stigma; marginal region rather broad at the tips of the wings, many of the forked veinlets subdivided; some of the neighbouring gradate veinlets indistinctly clouded with brown, some of the inner series much more darkly marked and forming an oblique streak in the disk opposite the stigma; hind-wings shorter, narrower and more lanceolate than the fore-wings, without marks, except a very little one on two transverse veinlets by the cubitus, at two-thirds of the length and not far from the hind border: veins white along the hind border and at the tips; subcostal region very narrow at the base, then widened and convex for a space, beyond which it is narrower and linear; areolets simple excepting two or four by the stigma which are divided by transverse veinlets; a few forked veins near the stigma. Length of the body 16 lines; of the wings 44 lines.

a. Port Natal. From M. Gueinzius' collection.

35. Myrmeleon longicornis.

Fuscus, M. formicarii *magnitudine, alis latioribus, facies pallide rufescens; palpi pallidi; antennæ subfuscæ, annulatæ, thorace longiores, basi pallidæ; prothorax longus, transverse bisulcatus, flavo varius; abdomen maculis elongatis furcatis fulvis, subtus flavescens; pedes pallidi, fusco notati; alæ sat latæ, fusco variæ, flavido albo-nebulosæ, areolis subcubitalibus duplicatis.*

Acanthaclisis longicornis, *Ramb. Hist. Nat. Ins. Neur.* 382, 7.

36. Myrmeleon fundatus.

Cinereo-ferrugineus; caput subproductum, antice et subtus testaceum, vertice nigro bifasciato; palpi testacei, labiales apice ferruginei; antennæ nigræ, clavatæ, albido annulatæ; thorax nigro quinquevittatus; abdomen nigrum; pedes ferruginei, validi, nigro varii, tarsis nigris albo cinctis; alæ hyalinæ, angustæ, apice vix angulatæ, anticæ apicem versus fusco vix notatæ.

Dark ferruginous, stout, tinged with gray, clothed with whitish hairs: head testaceous in front and beneath; vertex with a slight longitudinal furrow, and with two black bands; epistoma and mouth prominent; palpi testaceous; third joint of the labial palpi ferruginous: antennæ black, slender, clavate, reddish towards the base in the male, much shorter than the thorax; tips of the joints whitish: thorax with five black stripes, the middle one broad and subdivided, the others slender and interrupted: prothorax much narrower in front, a little longer than broad: abdomen black, much shorter than the wings: appendages short, ferruginous beneath, armed with short reverted spines: legs ferruginous, stout, hairy, more or less marked with black which mostly prevails on the fore-legs; tarsi black; fifth joint very long, white towards the base; spurs reddish, slightly curved, not angular, as long as the three first joints: wings hyaline, narrow, rather short, very obtusely angular at the tips; stigma whitish, with a small adjoining brown spot which is occasionally obsolete; veins alternately black and white, wholly white in some limpid parts; subcostal region very narrow at the base of the wing; areolets divided by transverse veinlets from near the base to the stigma, veins with one or no forks between the base and the stigma; marginal region narrow: fore-wings with a slight brown mark by the cubitus in the disk, and two or three by that vein beyond, forming a slight oblique streak opposite the stigma, these marks are

occasionally obsolete: hind-wings shorter and narrower than the fore-wings, without marks; veins mostly white. Length of the body 14—20 lines; of the wings 40—52 lines.

a. Australia. From the voyage of H. M. S. Rattlesnake. "Found on board, December 25th, 1847, off Port Curtis."
b. West Australia. From Mr. Clifton's collection.
c. Van Dieman's Land. From Mr. A. J. Smith's collection.
d. ——— ?

37. Myrmeleon subtendens.

Ferrugineus, subrobustus; caput flavum, supra nigrum; palpi labiales articulo 3o piceo; thorax nigro sexvittatus; prothorax antice angustior; abdomen nigrum, segmentis apice testaceis; pedes nigri, testaceo varii; alæ albidæ, perangustæ, lanceolatæ, sat breves, cinereo subnebulosæ, anticæ nigro notatæ.

Ferruginous, clothed with white hairs, rather stout: head black above, slightly produced in front, yellow in front and beneath: palpi yellow; third joint of the labial palpi pitchy except at the base and at the tip: thorax with six slight indistinct black stripes: prothorax much narrower in front, broader than long on the hind border: abdomen black, very much shorter than the wings; hind borders of the segments ferruginous: legs black, rather stout; femora at the base, hind-femora also above, hind-tibiæ and coxæ testaceous; tarsi and anterior tibiæ with two testaceous bands; spurs ferruginous, curved, longer than the first joint of the tarsus: wings whitish, very narrow, rather short, lanceolate, rounded at the tips, slightly mottled with gray; stigma whitish, slight, with a small adjoining black spot; veins alternately black and white; forks of marginal region very narrow: structure of the forks of the radial sector like that of *M. rapax* and *fundatus*: fore-wings with the subcostal areolets regularly divided by oblique transverse veinlets, but with no forked veins from near the base to the stigma; some little blackish marks along the cubitus and on the tip of its fork, and on two veinlets in the disk opposite the stigma: hind-wings less mottled, narrower and much shorter than the fore-wings; subcostal areolets upright from the base to one-third of the length where they decrease in size, from thence to the stigma they are larger and successively more and more oblique; all of them simple and with no forked veins. Length of the body 15 lines; of the wings 40 lines.

a. West Australia. From Mr. Clifton's collection.

38. Myrmeleon molestus.

Ferrugineus, robustus; caput testaceum, vertice piceo-nigro guttato; antennæ nigræ, subclavatæ, fulvo annulatæ; thorax nigro sexvittatus; abdomen nigrum; maculis dorsalibus testaceis; pedes nigri, validi, femoribus fulvo vittatis, tibiis testaceo fasciatis; alæ subhyalinæ, breves, angustæ, subangulatæ.

Ferruginous, stout, clothed with whitish hairs: head testaceous; vertex pitchy, with a band of black dots: palpi ferruginous: antennæ black, subclavate, much shorter than the thorax; fore borders of the joints tawny: thorax clothed above with black hairs, with six black stripes which much resemble those of *M. distinctus*: prothorax a little narrower in front, much broader than long: abdomen black, much shorter than the wings, with a testaceous dorsal spot on each segment: legs stout, black, hairy; femora with a tawny stripe beneath; tibiæ with testaceous bands; tips of the tarsi reddish; spurs reddish, much bent, angular, dentate beneath, black towards the tips: wings subhyaline, rather short and narrow, slightly angular at the tips; stigma yellowish; veins alternately black and testaceous, or whitish, in structure like those of *M. distinctus*; none of them clouded. Length of the body 15 lines; of the wings 42 lines.

a. ——— ?

39. Myrmeleon feralis.

Niger, robustus; caput antice subtusque testaceum; palpi testaceis, labiales apice ferruginei; antennæ subclavatæ, testaceo annulatæ; thorax ferrugineo quinquevittatus; abdomen testaceo maculatum; pedes validi, ferrugineo varii; alæ hyalinæ, angustæ, breves, apice subacuminatæ, anticæ apicem versus fusco vix notatæ.

Black, stout, clothed with whitish hairs: head testaceous in front and beneath; vertex with a slight transverse ridge: palpi pale testaceous; labial palpi with ferruginous tips: antennæ black, subclavate, much shorter than the thorax; tips of the joints testaceous: prothorax much narrower in front, a little broader than long, with a very slender ferruginous dorsal stripe, and a very broad subdivided one on each side: mesothorax and metathorax with five irregular ferruginous stripes: abdomen much shorter than the wings,

with a large testaceous dorsal spot on each segment, and with two or more on each towards the tip: appendages very short, beset with long curved black bristles: legs stout; fore-coxæ testaceous; middle femora and middle tibiæ partly ferruginous beneath; tarsi with reddish tips: spurs much curved, angular, reddish towards the base, dentate beneath: wings hyaline, narrow, rather short, slightly angular at the tips; stigma whitish with a small indistinct adjoining brown spot in each wing; veins black, with white bands, slightly ciliated; costal areolets simple, with a few forked veins near the stigma; marginal region narrow, most of the forks of the veinlets subdivided; a few veins in the disk opposite the stigma clouded slightly and for a very short space with brown: hind-wings a little narrower and much shorter than the fore-wings, not marked. Length of the body 18 lines; of the wings 44 lines.

a. North Africa. Presented by M. Doué.

40. Myrmeleon ferus.

Ater, latus; facies flava; palpi ferruginei; prothorax obscure ferrugineus, vitta lata nigra strigisque duabus obliquis flavis ornatus; alæ subcinereæ, angustæ, sat breves, anticæ fusco strigatæ.

Deep black, very stout and broad, clothed with black and white hairs: face pale yellow: palpi ferruginous: antennæ black, subclavate, much shorter than the thorax: prothorax narrower in front, dark ferruginous, with a broad black dorsal stripe, and with a yellow transverse slightly oblique streak on each side near the hind border; its breadth more than twice its length; abdomen much shorter than the wings, with a tawny spot on each side of the fifth, and on part of the fourth segment: legs stout, hairy; spurs very stout, much curved, as long as the three first joints of the tarsi: wings grayish, narrower, rather short, very slightly angular at the tips; stigma white, with a larger adjoining black spot in each wing; veins black, except on a small space in the disk of each wing, where they are white; subcostal areolets divided by transverse veinlets and with a few forked veins from two-thirds of the length of the wing to the stigma; marginal region narrow; second sector of the radius with numerous forks, which are generally nearly parallel to each other for a space, then approach very near to each other by means of two very obtuse angles, from whence to their marginal forks they are slightly converging: fore-wings with numerous slight

and generally interrupted brown streaks on the borders of the veins: hind-wings shorter but hardly narrower than the fore-wings, with a single very slight brown mark on the veins of a little subquadrate areolet by the white veins in the disk. Length of the body 20 lines; of the wings 49 lines.

a. Sierra Leone. Presented by the Rev. D. F. Morgan.

41. Myrmeleon impostor.

Piceus, vittis una albida duabusque testaceis; facies ferruginea; palpi testacei; antennæ annulatæ; abdomen vittis duabus ventreque testaceis; pedes testacei; alæ albidæ, longæ, subangustæ; subangulatæ, apicibus marginibusque posticis fusco notatis.

Pitchy, stout, clothed with whitish hairs: vertex with a slender dorsal whitish stripe, and with two testaceous spots on each side; face ferruginous: palpi testaceous: antennæ pitchy, subclavate, little more than half the length of the thorax; tips of the joints testaceous: prothorax very little narrower in front, hardly broader than long, with a slender whitish dorsal stripe which is shortened behind, and with two irregular testaceous stripes on each side: mesothorax and metathorax also striped, but less distinctly: abdomen testaceous beneath, and with an interrupted testaceous stripe on each side, much shorter than the wings; appendages of the male short, testaceous, curved outward, beset with black bristles: legs testaceous, stout, clothed with white hairs; spurs curved, as long as the three first joints of the tarsi: wings whitish, long, rather narrow, very obtusely angular at the tips; stigma white; veins alternately white and black; subcostal areolets with veins mostly forked from the base to the stigma, many of them divided by transverse veinlets from half the length to the stigma; marginal region broader at the tips; several slight, and in some cases almost obsolete brown marks along the hind border and about the tips, many of them on the forks of the marginal veinlets; hind-wings much narrower but hardly shorter than the fore-wings, with fewer brown marks, very slightly undulating along the hind border. Length of the body 23—24 lines; of the wings 60—64 lines.

a. Mexico. Presented by E. P. Coffin, Esq.
b. ———? From Mr. Children's collection.
c, *d*. ———?

42. Myrmeleon peritus.

Niger, robustus, linearis; caput album, nigro maculatum, antice testaceum; antennæ subclavatæ; thorax testaceo bivittatus; prothorax linearis, multo latior quam longior; pedes validi; alæ longæ angustæ sublineares, apice oblique truncatæ, fusco guttatæ et strigatæ, anticæ subfuscæ, posticæ hyalinæ.

This, and the following *Myrmeleon* form a group in the genus, and are easily distinguished from the preceding species by the great length and peculiar form of their wings.

Black, stout, linear, clothed with hoary hairs: head white; vertex very convex and prominent, with a slight longitudinal furrow, and with an oval grayish black spot on the disk, and with some black dots on each side; a black spot at the base of each antenna; front and face testaceous: antennæ subclavate, a little more than half the length of the thorax: prothorax linear, much broader than long, with a broad white, or testaceous white stripe, including a black dot on each side: mesothorax and metathorax with an irregular and interrupted testaceous stripe on each side: abdomen about half the length of the wings: legs very stout; spurs much curved, longer than the first joint of the tarsus: wings very long and narrow, almost linear from near the base to the tips, where they are obliquely truncated, and very slightly and in some cases almost imperceptibly hooked near the fore border; stigma whitish, small, indistinct; veins black, here and there with testaceous bands, or wholly testaceous, or white; marginal region broad and with numerous transverse veinlets at the tips of the wings: fore-wings pale brown, completely covered with dark brown dots which are largest and most regular on the subcostal region, having also some dark brown streaks on the disk at two-thirds of the length and at the tips, and a few little spots the hind border; subcostal region broad, each areolet with two transverse oblique veinlets near the base, and with one or two from thence till near the stigma: hind-wings hyaline, a very little shorter and not narrower than the fore-wings, pale brown towards the tips, and with a pale brown interrupted band near the middle; some dark brown spots along the hind border, and one on the disk at one-fourth of the length from the base; a long dark brown streak near the hind border beyond the middle, one opposite to it in the disk, one at the tip, and on the fore border a larger one which is partly interrupted by the stigma; some of these marks are occasionally indistinct or obsolete, and the

number of subcostal areolets with double divisions is variable. Length of the body 17—23 lines; of the wings 56—68 lines.

a. b. Sierra Leone. Presented by the Rev. D. F. Morgan.

43. Myrmeleon improbus.

Niger, robustus; caput testaceum; palpi nigri, labiales apice rufescentes; antennæ subclavatæ; thorax testaceo bivittatus; abdomen maris piceum elongato-fusiforme, fœminæ longius lineare nigro-piceum testaceo varium; femora fœminæ picea; alæ longæ, angustæ, apice oblique truncatæ, anticæ fusco guttatæ; posticæ fusco maculatæ et guttatæ.

Black, rather stout, clothed with white hairs: head testaceous; vertex whitish testaceous, very convex, with several black dots; palpi black; labial palpi with reddish tips: antennæ black, subclavate, little more than half the length of the thorax: prothorax linear, clothed on each side with brown hairs, with a broad testaceous stripe including a black dot on each side; its length about half its breadth: mesothorax and metathorax clothed on the disk with brown hairs, with two irregular and interrupted testaceous stripes on each side: abdomen of the male pitchy, elongate-fusiform; joints from the third successively decreasing in length and breadth: appendages straight, long, ferruginous with a black streak on each side, armed on the inner side with short black reverted spines: abdomen of the female pitchy black, linear, compressed, longer than that of the male, with testaceous marks along the disk: legs stout; spurs curved, longer than the first joint of the tarsus; femora of the female ferruginous: wings long and narrow, very slightly convex along the hind border, obliquely truncated at the tips, almost imperceptibly hooked near the fore borders; stigma whitish, small, indistinct; veins black, here and there with testaceous bands, or wholly testaceous, or white; marginal region broad at the tips of the wings: fore-wings of the male very pale brown, with a few small limpid spaces, covered with numerous brown dots, which are most prevalent on the hind border, and along the middle of the disk and near the tip of the fore border, where they are larger and darker and partly confluent; subcostal areolets divided by a single row of oblique transverse veinlets; a double row on one, or occasionally on three near the base: hind-wings subhyaline, very little shorter and not narrower than the fore wings, with various brown dots along the hind border from half the length to the tip where the dots extend to the disk, with a brown streak along the truncated part, with another

on the fore border by the tip, and on the other side of the stigma a brown spot which extends towards the disk, and is there occasionally connected with another spot: wings of the female hyaline, a little narrower and less truncated at the tips than those of the male; the brown marks paler and more diffused; hind-wings with larger and paler spots along the hind border, with two brown streaks on the disk before the middle, with the spot at the tip shorter, and with that by the stigma longer and narrower and not descending to the disk where there is no other spot. Length of the body 20—22 lines; of the wings 59—60 lines.

a. East Indies. From Mr. Sowerby's collection.
b. North India. From Mr. Stevens' collection.

44. Myrmeleon inclusus.

Obscure ferrugineus, subtus testaceus; caput piceum, facie palpisque testaceis; antennæ nigræ, filiformes; pedes nigri, femoribus basi tibiisque posticis testaceis; alæ subcinereæ, angustæ, longissimæ, apice subacuminatæ, maculis limpidis et subfuscis variæ, posticæ maculis duabus magnis subrotundis fuscis.

This *Myrmeleon* forms a group of itself, and differs in structure from all the preceding species. Dark ferruginous, rather stout, clothed with blackish hairs, testaceous beneath: head pitchy; face and palpi testaceous: antennæ black, filiform, a little longer than the thorax; joints very numerous: prothorax with some hoary marks, narrower in front, a little broader than long: abdomen a little paler than the thorax, with a hoary tinge at the base, less than half the length of the wings: legs black, stout; femora at the base and coxæ testaceous; hind tibiæ mostly testaceous; spurs curved, as long as the four first joints of the tarsi: wings grayish, narrow, very long, slightly pointed at the tips; stigma whitish; veins black, some of them with testaceous or with white bands, here and there wholly white; subcostal areolets divided by transverse veinlets from near the base to the stigma, many of their veins forked towards the stigma; marginal region broad at the tips: fore-wings with numerous limpid spots which are mostly along the borders and at the tips, and are alternate with some pale brown spots; a few dark brown spots at the base, and one at the tip of the subcosta; and one in the disk between the first sector of the radius and the cubitus near their tips: hind-wings a little narrower and paler but not shorter than the fore-wings, with some alternate pale brown and limpid spots along the borders towards the tips; two large brown nearly round spots, one

near the fore border at five-sixths of the length, the other near the hind border at two-thirds of the length. Length of the body 23 lines; of the wings 72 lines.

a. East Indies. From Archdeacon Clerk's collection.

Subdiv. 3.

Alæ anticæ posticis plus maculatæ. Tibiæ calcaribus fere rectis aut subflexis.

Myrmeleon, *Ramb. Hist. Nat. Ins. Neur.* 382.

Body almost bare: labial palpi twice or four times the length of the maxillary palpi; last joint generally spindle-shaped, very thick in the middle, sometimes club-shaped: spurs of the tips of the tibiæ almost straight or slightly bent, not reflected; first joint of the tarsi much longer than any one of the three following, sometimes at least as long as the last, or as the other three together; claws very long, hardly reflected, not dilated at the base: wings generally rather narrow, rarely with large spots; subcostal region having generally only a single row of areolets; hind-wings almost always less spotted than the fore-wings, very rarely with a winglet at the hind base in the males; veins various.

Sect. 1.

Antennarum clava oblonga. Tarsorum articulus 2us vel 3us 1o multo brevior.

Subsect. 1.

Palpi labiales maxillaribus non plus duplo longiores.

Group 1.

Alæ maculis nullis magnis aut determinatis.

a.

Regio costalis e areolis bilineata, vel reticulata, vel venulis transversis sæpe furcatis.

b.

Regio subcostalis venulis sæpe bifidis. Maris alæ posticæ alula parva apud basim posteriorem munitæ.

45. MYRMELEON FALLAX.

Rufus, fusco varius, magnus; facies flava; antennæ flavescentes, subclavatæ, nigro annulatæ, thorace breviores; abdomen fuscum, maculis lateribus ventreque flavis; pedes hirti, breves, flavescentes, fusco varii; alæ dilatatæ, posticæ albido variæ.

Myrmeleon fallax, *Ramb. Hist. Nat. Ins. Neur.* 385, 1.

Guiana.

b b.

Regio subcostalis reticulata, vel e areolis bilineata. Alæ posticæ alula nulla.

In this group the species have very slender bodies, the abdomen of the male is very long, and in some species the areolets of the subcostal region are divided by transverse veinlets.

46. MYRMELEON LONGICAUDUS.

Fuscus; antennæ sensim clavatæ, crassæ; thorax pallide variegatus; alæ ad areolarum posticarum angulos fusco punctatæ, obtusiusculæ; abdomen maris longissimum hirtum supra testaceum cercis prominulis brevibus, fœminæ alis æquale fuscum hirsutiusculum.

Mymecoleon longicaudus, *Burm. Handb. Ent.* ii. 994, 8.

Myrmeleon longicaudus, *Ramb. Hist. Nat. Ins. Neur.* 386, 2, pl. 12, f. 3.

a. North America. Presented by the Entomological Club.

b. ——— ? From Mr. Milner's collection.

47. MYRMELEON CONSPERSUS.

Niger, gracilis; antennæ sensim clavatæ, crassæ, nigræ; abdomen supra cingulis pallidis; alæ graciles, anticæ dense fusco conspersæ, stigmate obsoleto albido.

Myrmecoleon irroratus, *Burm. Handb. Ent.* ii. 995, 11.
Myrmeleon conspersus? *Ramb. Hist. Nat. Ins. Neur.* 387, 3.

North America.

a, *b*. ——— ? From Mr. Milne's collection.
c, *d*. ——— ?

48. Myrmeleon nebulosus.

Rufo-cinereus; vertex subgibbosus; antennæ rufescentes, apice obscuriores; thorax fusco varius; pedes flavi, tibiis et tarsorum articulis apice nigris; alæ hyalinæ, anticæ maculis guttisque rufo-flavis.

Myrmeleon nebulosus, *Ramb. Hist. Nat. Ins. Neur.* 387, 4.

a. North America.
b. ——— ? From Mr. Milne's collection.

49. Myrmeleon iniquus.

Mas. *Fulvus, gracillimus; caput nigro maculatum; antennæ ferrugineæ, subannulatæ, apice piceæ, thorace multo longiores; thorax piceo bivittatus; abdomen pubescens, apice piceum, alis multo longius; pedes testacei; alæ hyalinæ, breves, subacuminatæ, fusco confertim guttatæ.*

Tawny, very slender: head blackish about the base of the antennæ; vertex with six black spots, two in front and four in a band behind: antennæ ferruginous, subclavate, pitchy towards the tips, very much longer than the thorax; fore borders of the joints slightly testaceous: thorax with two pitchy stripes: prothorax linear, broader than long: abdomen very much longer than the wings, pubescent, pitchy towards the tip: appendages short, bristly, curved downwards: legs testaceous: wings hyaline, moderately broad, rather short, slightly pointed; stigma whitish, very indistinct, as is also an adjoining pale brown spot; veins brownish, with very numerous little brown dots on their forks and junctions: subcostal areolets simple, several of their veins forked or twice forked towards the stigma. Length of the body 18 lines; of the wings 25 lines.

a. ——— ?

50. Myrmeleon immitis.

Albido-testaceus, gracillimus; palpi albidi; antennæ nigræ, testaceo annulatæ, thorace breviores; thorax piceo bivittatus; pedes testacei, nigro strigati; tarsis albidis nigro bicinctis; alæ limpidæ, breves, sublatæ, anticæ basi fusco notatæ.

Whitish, testaceous, very slender: head pitchy about the base of the antennæ; vertex slightly tuberculated: palpi whitish: antennæ black, clavate, shorter than the thorax; tips of the joints testaceous: thorax with a pitchy stripe on each side: prothorax linear, a little longer than broad: abdomen longer in the male than in the female; sides pitchy in the female, black in the male especially towards the tip which is almost wholly black: legs pale testaceous, streaked with black, beset with whitish and black bristles; tarsi whitish, black at the base and at the tips: wings limpid, rather broad and short, not pointed; stigma white, rather small; veins and areolets comparatively few; veins white, with black bands, ciliated, slightly clouded with brown from the base to the middle of the wing; forks of some of the marginal veinlets along the hind border also clouded with brown, but very slightly; besides these are two darker brown dots, one near the tip of the first sector of the radius, the other near the tip of the fork of the cubitus: hind-wings shorter and a little narrower than the fore-wings, unspotted. Length of the body 11½—14½ lines; of the wings 18—20 lines.

a. Santarem, Brazil. From Mr. Stevens' collection.
b. Brazil. From Mr. Stevens' collection.

51. Myrmeleon versutus.

Niger, gracillimus; caput flavo varium; palpi flavi, apice nigri, maxillares nigro bifasciati; antennæ subfiliformes, thorace multo longiores; prothorax flavus, nigro bivittatus; thoracis segmenta flavo maculata et marginata; abdomen testaceum, longissimum, piceo vittatum, apice nigrum; pedes testacei; alæ hyalinæ, parvæ, fusco confertim guttatæ.

Black, very slender: head shining in front, yellow about the eyes and around the base of the antennæ; vertex with two yellow bands which are interrupted in the middle; face yellow on each side, and with a yellow angular band: palpi yellow with black tips; maxillary palpi with two black bands: antennæ black, almost filiform,

very much longer than the thorax: prothorax yellow, a little narrower in front, broader than long, with two broad black stripes, each of which includes a yellow dot in front: segments of the mesothorax and of the metathorax with yellow dots or stripes and borders: abdomen dull testaceous, with a pitchy stripe, very much longer than the wings, black towards the tip: appendages testaceous, curved upward, thickly beset with black bristles: legs testaceous: wings hyaline, short and narrow, thickly and almost equally covered with brown dots, of which there are two rows on the subcostal region; stigma whitish; veins partly white, ciliated; subcostal areolets simple, with a few forked veins near the stigma: hind-wings a little longer and shorter than the fore-wings. Length of the body 14 lines; of the wings 22 lines.

a. Mexico. Presented by E. P. Coffin, Esq.

52. MYRMELEON FEROX.

Niger, gracillimus; vertex luteus, valde convexus, nigro interrupte fasciatus; facies flava; palpi testacei; antennæ subfiliformes, thorace longiores; prothorax flavo univittatus et quadrimaculatus; thoracis segmenta flavo maculata et marginata; abdomen longissimum, segmentorum lateribus testaceo maculatis; pedes testacei, graciles, tibiis tarsisque apice nigris; alæ cinereæ, anticæ fusco quadrinotatæ.

Black, very slender: head with a yellow ring round the base of each antenna; vertex luteous, very convex, with an interrupted black band; face pale yellow: palpi testaceous: antennæ black, almost filiform, longer than the thorax: prothorax linear, a little longer than broad, with a yellow dorsal stripe, and two yellow spots on each side; under side yellow: segments of the mesothorax and of the metathorax with yellow spots and borders: abdomen very much longer than the wings; hind borders of the segments with a testaceous spot on each side: appendages black, short, bristly, slightly curved: legs testaceous, slender; tips of the tibiæ and of the tarsi black, the latter black about the middle: wings gray, moderately long and broad; stigma whitish, small, with a brown spot adjoining it in each fore-wing; veins black, with some white bands; subcostal areolets simple, their veins mostly forked along one-third of the length from the stigma to the base; three slight brown marks along the cubitus, and a short brown streak proceeding

obliquely outwards from the tip of the fork of the cubitus: hind-wings very little narrower or shorter than the fore-wings, without marks. Length of the body 20 lines; of the wings 28 lines.

a. California. From M. Hartweg's collection.

a a.

Regio costalis venulis transversis simplicibus, vel e areolis unilineata.

b.

Alæ posticæ anticis multo longiores.

53. Myrmeleon insignis.

Pallidus, nigro varius; vertex productus; antennæ nigræ, basi flavo cinctæ, thorace longiores; abdomen rufescens, vitta dorsali fusca, subtus nigricans; pedes nigri, albido annulati; alæ fusco guttatæ lineatæ et nebulosæ, anticæ obtusæ, posticæ lanceolatæ anticis multo longiores.

Myrmeleon insignis, *Ramb. Hist. Nat. Ins. Neur.* 388, 5, pl. 11, f. 2.

54. Myrmeleon anomalus?

Fuscus, gracillimus; caput testaceum, nigro quadrifasciatum; palpi albidi; antennæ pubescentes, gracillimæ, albo annulatæ, apicem versus albæ, clava fusca; prothorax longior quam latior, testaceo trivittatus; mesothoracis et metathoracis segmenta testaceo maculata et marginata; abdomen fasciis ventreque testaceis; pedes testacei, nigro varii; alæ limpidæ, apice albidæ, non acuminatæ, anticæ fuscæ confertim guttatæ, posticæ longiores angustiores, apice tantum fusco notatæ.

Myrmeleon anomalus? *Ramb. Hist. Nat. Ins. Neur.* 388, 6.

Brown, very slender: head testaceous, with two black bands, one above, the other below the base of the antennæ; vertex with two black bands: palpi whitish: antennæ subclavate, brown, pubescent, very slender, as long as the thorax; joints with white bands, wholly white towards the club which is wholly brown: pro-

thorax longer than broad, hardly narrower in front, with three slender, testaceous stripes: segments of the mesothorax and of the metathorax with testaceous borders, some of them with testaceous spots: abdomen shorter than the wings; segments with testaceous bands on their hind borders; underside testaceous: legs pale testaceous, long and slender; fore-femora streaked with black; fore-tibiæ and fore-tarsi black, testaceous at the base; hind-femora, hind-tibiæ and hind-tarsi with black tips: wings limpid, with whitish tips which are not pointed; stigma white; veins white, with black tips, here and there wholly white in the fore-wings which are moderately broad; subcostal areolets simple, with a few forked veins near the stigma: fore-wings with numerous brown dots on the forks and junctions of the veins; none of these dots on the broad subcostal region, nor on two spaces where the veins are wholly white: hind-wings much longer and narrower than the fore-wings, without dots except at the tips. The specimen here described does not agree in some respects with Rambur's characters of *M. anomalus*, and may be a distinct species. Length of the body 15 lines; of the wings 36 lines.

a. Venezuela. From Mr. Dyson's collection.

b b.

Alæ æquales, vel anticæ posticis longiores.

c.

Tibiarum calcaria plus minusve flexa, tarsorum articulis 1o ad 3um vel 1o ad 4um longitudine æquales.

d.

Venæ 5æ ramus 1us marginem posteriorem oblique attingens.

55. MYRMELEON ANNULATUS.

Flavescens; capite thoraceque maculis, abdomine fasciis fuscis, alis fusco alboque reticulatis.

Myrmeleon annulatus, *Klug, Symb. Phys. dec.* 4, pl. 36, f. 7, No. 13. *Ramb. Hist. Nat. Ins. Neur.* 389, 7.

Dscheil el achterie. South Spain.

56. Myrmeleon lineosus.

Flavus, M. formicario *minor*, *nigro varius*; *thorax nigro univittatus*; *abdomen nigro trivittatus*, *vittis lateralibus subinterruptis*; *alæ breves*, *hyalinæ*, *sat latæ*, *anticæ e maculis fuscis bilineatæ*, *et apice V-notatæ*, *posticæ breviores vix notatæ*.

Myrmeleon lineosus, *Ramb. Hist. Nat. Ins. Neur.* 389, 8.

Egypt.

57. Myrmeleon subpunctatus.

Fusco-rufescens, M. formicarii *magnitudine*; *caput nigro fasciatum*, *vertice nigro lineato*, *facie flava*; *antennæ pallidæ*, *apice obscuriores*; *thorax flavo varius*, *prothorax flavo trivittatus*; *abdominis segmentorum margines postici rufescentes*; *pedes testacei*, *tarsis rufo-fuscis*, *articulo 5o pallido fusco annulato*; *alæ hyalinæ sat latæ subacuminatæ*, *apice V-notatæ*, *posticæ seriato striatæ*, *anticis non breviores*.

Myrmeleon subpunctatus, *Ramb. Hist. Nat. Ins. Neur.* 390, 9.

Africa.

58. Myrmeleon bistrigatus.

Cinereus, *rufo fuscoque varius*, M. formicarii *magnitudine*, *alis longioribus*; *abdomen fuscum*, *segmentis nonnullis apice flavescentibus*; *alæ hyalinæ*, *apice V-notatæ*; *posticæ angustæ*, *lanceolatæ*, *anticis paullo longiores*, *fascia postica apicali fusca*.

Myrmeleon bistrigatus, *Ramb. Hist. Nat. Ins. Neur.* 391, 10.

Otaheite.

59. Myrmeleon tetragrammicus.

Fuscus, *segmentorum omnium marginibus flavis*; *alæ stigmate albo*, *posticæ puncto fusco ad limbum internum ante apicem*.

Myrmeleon tetragrammicus, *Pallas*, *Fabr. Ent. Syst. Supp.* 205, 3, 4. *Oliv. Enc. Méth.* viii. 123, 13. *Ramb. Hist. Nat. Ins. Neur.* 391, 11.

Myrmecoleon tetragrammicus, *Burm. Handb. Ent.* ij. 995, 14. *a.* ——?

France, Hungary.

60. MYRMELEON PULVERULENTUS.

Fuscus, M. formicario *paullo minor; caput nigrum, facie lineisque duabus flavis; antennæ fuscæ, clavatæ, thoracis longitudine, clava flavo maculata; abdomen fuscum; pedes flavi, tarsorum articulis apice fuscis; alæ æquales, breviusculæ, sat latæ, anticæ fusco pulverulentæ.*

Myrmeleon pulverulentus, *Ramb. Hist. Nat. Ins. Neur.* 392, 12.

Bengal.

61. MYRMELEON HORRIDUS.

Testaceus, subgracilis; thorax supra ferrugineus; prothorax longior quam latior, antice angustus, testaceo bivittatus; abdomen longum, nigro maculatum; tibiæ nigro variæ; tarsi nigri, apice testacei; alæ amplæ, subcinereæ, apice subangulatæ, anticæ apicem versus fusco notatæ.

Testaceous, rather slender: face and palpi pale testaceous: thorax ferruginous above: prothorax narrower in front, longer than broad, with a pale testaceous stripe along each side, and a slight short dorsal pale testaceous streak by the hind border: abdomen long, but much shorter than the wings; second and third segments with large black spots which are forked behind; fourth wholly black; fifth partly black: appendages pitchy, rather long, very slightly curved, beset with black bristles: legs testaceous, stout; tibiæ with black marks; tarsi black from the first to the fourth joint; spurs ferruginous, much curved, nearly as long as the four first joints of the tarsus, which joints are very short: wings ample, slightly gray, very obtusely angular at the tips; stigma whitish, with a small adjoining brown spot in each wing; veins black, here and there with white bands which are most frequent on the subcosta and on the radius; several of the subcostal areolets divided by transverse veinlets towards the stigma; many of their veins forked between one-third of the length of the wing and the stigma; marginal region broad at the tip of the wing: fore-wings with some short brown streaks along the radius, with some brown marks on the forks of the veinlets at the tip and along the hind border, with a

brown spot at the end of the fork of the cubitus, and with another in the disk nearly opposite the stigma: hind-wings shorter and narrower than the fore-wings, with a brown spot near the tip and with another on the hind border at two-thirds of the length. Length of the body 17 lines; of the wings 43 lines.

a. ——— ?

62. Myrmeleon periculosus.

Piceus; caput subtus oculos flavum, facie palpisque maxillaribus testaceis; antennæ nigræ, thorace paullo longiores, testaceo subannulatæ; pedes fulvi, femoribus tibiisque apice nigricantibus, tarsis nigris basi pallidis; alæ limpidæ, longæ, angustæ, lanceolatæ, acuminatæ.

Pitchy: head yellow beneath the eyes and with two yellow rings at the base of the antennæ; face and maxillary palpi testaceous; labial palpi pitchy: antennæ black, subclavate, a little longer than the thorax; tips of the joints along three-fourths of the length testaceous: prothorax linear, a little broader than long: legs tawny; femora and tibiæ blackish towards the tips; tarsi black; first joint pale testaceous at the base: wings limpid, long, narrow, lanceolate; their tips distinctly pointed; stigma white, with a very small adjoining pale brown spot in the fore-wings; veins alternately black and white; subcostal areolets simple, with a few forked veins from half the length to the stigma; marginal region narrow: hind-wings narrower but very little shorter than the fore-wings. Length of the body 14 ? lines; of the wings 36 lines.

a. ——— ?

63. Myrmeleon ingeniosus.

Cinereo-piceus, gracilis; vertex fulvo maculatus; facies testacea; antennæ graciles, thoracis longitudine, testaceo annulatæ; thoracis et abdominis segmenta testaceo maculata et marginata; pedes testacei, tibiis apice nigris, tarsis albis nigro cinctis; alæ hyalinæ, longæ, angustæ, subacuminatæ, apice fusco notatæ, anticæ linea obliqua postica fusca.

Pitchy, slender, with a hoary tinge: vertex with two bands of tawny spots; face and palpi testaceous; third joint of the labial palpi with a pitchy band: antennæ subclavate, slender, as long as the thorax; fore borders of the joints testaceous; club testaceous

beneath: prothorax nearly linear, not broader than long; mesothorax and metathorax with some testaceous marks in the disks of the segments and with testaceous hind borders: abdomen much shorter than the wings; segments mostly with testaceous spots and hind borders: legs testaceous; tibiæ with black tips; tarsi white, with a black band and black tips: wings hyaline, long and narrow, slightly pointed; stigma white, with a small adjoining brown spot in the fore-wing; veins white with black bands, ciliated; subcostal areolets simple, most frequently with a few of their veins towards the stigma forked; gradate veinlets towards the tip, and marginal veinlets along the tip and along the hind border clouded with brown; a darker brown oblique streak on some veinlets in the disk beneath the stigma, and another rising obliquely outward from the tip of the fork of the cubitus, which is sometimes clouded with brown at its base: hind-wings narrower but not shorter than the fore-wings; forks of marginal veinlets towards the tips slightly clouded with brown. Length of the body 11—12 lines; of the wings 28—31 lines.

a. Brazil.
b. ——— ? From Mr. Milne's collection.
c, *d*. ——— ?

64. MYRMELEON AUDAX.

Testaceus, gracilis; caput nigro fasciatum; palpi albidi; antennæ graciles, piceo annulatæ, thoracis longitudine; thorax piceo varius; prothorax paullo longior quam latior, piceo quadrivittatus; abdomen piceum, marginibus posticis testaceis; alæ limpidæ, longæ, angustæ, anticæ apice fusco notatæ.

Testaceous, slender: head black about the base of the antennæ and with a black band on the vertex: palpi whitish: antennæ testaceous, slender, subclavate, as long as the thorax, with a pitchy band on the hind border of each joint; club mostly pitchy: prothorax a little narrower in front, rather longer than broad, with four pitchy interrupted stripes, the outer pair shortened in front: segments of the mesothorax and of the metathorax pitchy, with testaceous spots and borders: abdomen pitchy; hind borders of the segments testaceous: legs testaceous, long, slender; tips of the tibiæ and of the tarsi black: wings limpid, long, narrow, veins whitish, with a small adjoining pale brown spot in the fore-wings; veins white; a few of them with black bands; subcostal areolets simple, with very few forked veins near the stigma; some of the forks of the marginal veinlets about the tips, and some of the contiguous gradate veinlets

clouded with brown, the latter more darkly coloured than the former as is also an oblique brown streak proceeding outwardly towards the disk from the tip of the fork of the cubitus: hind-wings narrower and a little longer than the forewings, without marks except a brown dot near the hind border at three-fourths of the length. Length of the body 10? lines; of the wings 34 lines.

a. Nepaul. From the Hardwicke bequest.

65. MYRMELEON GRAVIS.

Testaceus, gracilis; caput nigro bifasciatum; vertex piceo maculatus; palpi albidi, labiales apice piceo maculati; antennæ subannulatæ; prothorax longior quam latior, piceo quadrivittatus; mesothorax et metathorax maculis piceis; abdomen piceum cano-testaceo maculatum; tarsi nigro annulati; alæ limpidæ, longæ, perangustæ, subacuminatæ, anticæ apice fusco notatæ.

Testaceous, slender: head black about part of the eyes, and with two black bands, one above, the other below the base of the antennæ; vertex with two bands of pitchy spots: palpi whitish; third joint of the labial palpi with a pitchy spot: antennæ testaceous, clavate; each joint darker at the base: prothorax linear, longer than broad, with four irregular and interrupted pitchy stripes: mesothorax and metathorax grayish, testaceous, with pitchy spots: abdomen pitchy, much shorter than the wings; each segment with a large, oblong, hoary-testaceous spot, and a small one on each side by the hind border: legs testaceous, with some pitchy or black marks; joints of the tarsi from the first to the fourth black at the base; fifth black at the tip: wings limpid, long, very narrow, slightly pointed; stigma white, with an adjoining very dark brown spot in the fore-wings; veins white, with black bands, ciliated, here and there wholly white: subcostal areolets simple, their veins not forked between the base and the stigma; a small brown spot near the stigma, a larger one near the tip of the fork of the cubitus, and an oblique one on some of the gradate veinlets towards the tip; others of the gradate veinlets, and some of the forks of the marginal veinlets along part of the hind border from the tip clouded with brown: hind-wings a little narrower and shorter than the fore-wings, without marks, except a dot near the hind border at three-fourths of the length from the base. Length of the body 12 lines; of the wings 28 lines.

a. Ceylon. Presented by R. Templeton, Esq.

66. Myrmeleon striola.

Cinereo-piceus, gracilis; caput luteum, nigro varium, facie palpisque testaceis; antennæ piceæ, graciles, luteo annulatæ, thoracis longitudine; prothorax sublinearis, multo latior quam longior, testaceo maculatus; thoracis segmenta testaceo maculata et marginata; pedes testacei, nigro notatæ; alæ longæ, perangustæ, acuminatæ, posticæ fusco strigatæ.

——— striola, *Leach, MSS.*

Male. Pitchy, slender, tinged with gray: head luteous, black above the base of the antennæ, with some black ridges and spots on the vertex; a black shining band beneath the base of the antennæ; face and palpi pale testaceous; antennæ pitchy, slender, clavate, as long as the thorax; a luteous band on the fore border of each joint: prothorax almost linear, much broader than long, with several dull testaceous spots: segments of the mesothorax and of the metathorax with testaceous borders, their disks with indistinct testaceous marks: abdomen shorter than the wings: legs testaceous, stout, bristly, with some slight black marks: wings long, very narrow, pointed; stigma pale brown, indistinct in the hind-wings; veins testaceous, slightly ciliated; sectors and cubitus with black bands; subcostal areolets simple, their veins not forked between the base and the stigma; hind-wings narrower and a little longer than the fore-wings, with a brown streak which passes through the forks of the marginal veinlets and extends obliquely to the tip of the wing, where it joins the hind border; its length varies from less than one-fourth to less than one-third of that of the wing. Length of the body 14—16 lines; of the wings 32—38 lines.

a, b. New Holland.

67. Myrmeleon perjurus.

Testaceus, subrobustus; caput nigro bifasciatum, vertice nigro maculato; antennæ ferrugineæ, subannulatæ, thorace vix breviores; thorax piceo sexvittatus; abdomen piceum; pedes validi, tarsis apice nigris; alæ hyalinæ, angustæ, apice fusco notatæ, posticæ striga subapicali fusca.

Testaceous, rather stout: head with a black band before and another behind the base of the antennæ; vertex with two bands of black spots: palpi testaceous, not long: antennæ ferruginous, subclavate, nearly as long as the thorax; fore borders of the joints

testaceous: prothorax very little narrower in front, broader than long, with six more or less complete pitchy stripes, which are continued on the mesothorax and on the metathorax, but are there more interrupted and irregular: abdomen pitchy, sometimes partly testaceous on each side and on the hind borders of the segments: legs testaceous, stout; tarsi black towards the tips: wings hyaline, rather long and narrow, pointed; stigma pale testaceous, with an adjoining indistinct pale brown spot in the fore-wings; veins pale testaceous, with black bands, ciliated; subcostal areolets simple, with occasionally one or two forked veins near the stigma; forks of the gradate veinlets along the hind border towards the tip clouded with pale brown; in some cases a more distinct streak beneath the stigma at one-third of the breadth from the hind border; hind-wings narrower and more pointed, but hardly shorter than the fore-wings, with a brown streak towards the tip near the hind border, and forming a line with the clouded forks of the marginal veinlets. Length of the body 13—15 lines; of the wings 32—36 lines.

a—c. Sandwich Islands. Presented by Capt. Beechey.

68. Myrmeleon torvus.

Luteus; caput nigro quadrifasciatum, facie palpisque testaceis; thorax nigro notatus; prothorax paullo longior quam latior, antice subangustior; abdomen piceum, vitta interrupta dorsali ventreque testaceis; pedes testacei; alæ longæ, perangustæ, acuminatæ, posticæ anticis angustiores et multo longiores, fusco strigatæ et apice notatæ.

Pale luteous, slender; vertex with two irregular interrupted black bands; two more in front, one above, the other below the base of the antennæ; face and palpi pale testaceous: thorax with some blackish marks which are most prevalent on each side, and there form an irregular interrupted stripe: prothorax slightly narrower in front, a little longer than broad: abdomen pitchy, shorter than the wings, testaceous beneath, and with an irregular testaceous dorsal stripe, which is interrupted towards the hind border of each segment, and especially so near the tip: legs testaceous; fifth joint of the tarsi whitish, with a black band near the tip which is testaceous: wings long, extremely narrow, pointed; stigma narrow, very pale brown, hardly visible in the hind-wings; veins pale testaceous, ciliated; longitudinal veins with a few black bands; subcostal areolets simple, their veins not forked between the base and the stigma; two transverse veinlets above the second sector and

beyond its third fork clouded with brown, as is also the outer veinlet of the last of the quadrate areolets and the cubitus: hind-wings narrower and much longer than the fore-wings; forks of the marginal veinlets at the tip of the wing clouded with brown at the base; a brown streak near the hind border like that of the preceding species, but irregular and interrupted. Length of the body 14 lines; of the wings 34 lines.

a. ——— ?

69. Myrmeleon verendus.

Testaceus, robustus, piceo quadrivittatus; caput nigro maculatum; antennæ piceæ, annulatæ, thorace paullo breviores; prothorax longior quam latior, antice paullo angustior; abdomen piceo univittatum; alæ limpidæ, latæ, apice fusco notatæ.

Testaceous, rather stout: head blackish about the base of the antennæ; vertex with several blackish spots: palpi pale testaceous; antennæ pitchy, subclavate, rather long, a little shorter than the thorax; a tawny band on the fore border of each joint: prothorax longer than broad, a little narrower in front, with four irregular pitchy stripes, the outer pair shortened in front: mesothorax and metathorax with four pitchy stripes which are much indented and very irregular, and inclose some testaceous spots: abdomen dark testaceous, shorter than the wings, with a pitchy stripe above and another beneath: legs pale testaceous, with a few black dots: wings limpid, broad; stigma rosy, indistinct in the hind-wings; veins whitish; sectors of the radius and cubital vein with black bands; subcostal areolets simple, their veins with three forks before the stigma; forks of the marginal veinlets clouded with pale brown at the base along the hind border to the tip of the wing; a darker brown dot by the last of the quadrate areolets by the cubitus: hind-wings narrower and a little shorter than the fore-wings; an oblong brown spot formed by the clouded gradate veinlets near the hind border at three-fourths of the length; forks of marginal veinlets from thence to the tip of the wing clouded with brown at the base. Length of the body 15 lines; of the wings 36 lines.

a. North India. From Mr. Stevens' collection.

70. Myrmeleon vesanus.

Testaceus; capitis vertex nigro quinquemaculatus; palpi albicantes; antennæ luteæ, piceo annulatæ; prothorax linearis, latior quam longior, ferrugineo quadrivittatus; mesothorax et metathorax ferruginei, testaceo quinquevittati; abdomen piceo univittatum; alæ limpidæ, latæ, apice fusco notatæ.

Very nearly allied to *M. verendus*. Testaceous: head pale yellow towards the mouth; vertex with five black spots: palpi whitish: antennæ luteous; hind borders of the joints with pitchy bands along two-thirds of the length from the base: prothorax linear, broader than long, with four ferruginous stripes, the outer pair shortened in front and very slight; a ferruginous dot on each side of the hind border between them and the inner pair: mesothorax and metathorax dark ferruginous with five slender testaceous stripes: abdomen nearly as long as the wings, with a pitchy dorsal stripe; underside pitchy: legs pale testaceous: wings limpid, broad; stigma rosy, indistinct, especially in the hind-wings; veins whitish with black bands; subcostal areolets simple from the base to the stigma; one or two of their veins forked before the stigma; tip of the radius and of the anterior fork of the sector and outer side of the last quadrate areolet by the cubitus clouded with dark brown; forks of the marginal veinlets from the stigma to the tips and along the hind border clouded with pale brown: hind-wings narrower but not shorter than the fore-wings; forks of the marginal veinlets clouded with pale brown at the base from the stigma to the tip of the wing and along the adjoining part of the hind border. Length of the body 17 lines; of the wings 34 lines.

a. North India. From Mr. Stevens' collection.

71. Myrmeleon minax.

Ferrugineus, flavo trivittatus; caput testaceo varium, antice flavum; palpi albidi; antennæ piceæ, annulatæ, thorace paullo breviores; prothorax antice angustior, non longior quam latior; thoracis segmenta flavo marginata; abdomen piceum, fulvo bivittatum, apice flavum; pedes testacei; alæ hyalinæ, sat latæ, subacuminatæ, apice fusco notatæ.

Very nearly allied to *M. verendus* and *vesanus*. Dark ferruginous: head pale yellow in front; vertex with a testaceous band;

hind part with some testaceous spots: palpi whitish: antennæ pitchy, subclavate, a little shorter than the thorax; fore borders of the joints and club beneath luteous: thorax with three yellow stripes; prothorax narrower in front, not longer than broad: segments of the mesothorax and of the metathorax with yellow borders: abdomen pitchy, a little shorter than the wings, with two indistinct tawny stripes; tip yellow: legs testaceous: wings hyaline, moderately broad, slightly pointed; stigma slightly rosy, indistinct in the hind-wings; veins whitish, slightly ciliated towards the tips of the wings, with blackish bands towards the base; gradate veinlets darker towards the tips; subcostal areolets simple and with veins not forked from the base to the stigma; five dark brown dots, one at the junction of the radius and the subcosta, the second on the anterior fork of the sector, the third on its thirteenth fork, the fourth by the last quadrate areolet by the cubitus, and the fifth at the end of the fork of the cubitus; marginal veinlets along the hind border and from the stigma to the tips clouded with brown at the base; hind-wings shorter and a little narrower than the fore-wings, marked in like manner, but very indistinctly. Length of the body 18 lines; of the wings 34 lines.

a. North India. From Mr. Stevens' collection.

72. Myrmeleon pugnax.

Niger, gracilis; caput flavo fasciatum, facie palpisque flavis; antennæ thoracis longitudine, clava subtus testacea; prothorax antice paullo angustior, multo longior quam latior, flavo trivittatus; mesothoracis et metathoracis segmenta flavo marginata; abdomen vittis duabus et segmentorum marginibus posticis fulvis; pedes testacei, femoribus nigro strigatis; alæ limpidæ, perangustæ, acuminatæ, apice fusco notatæ.

Black, slender: head with an interrupted yellow band on the vertex; face and palpi yellow: antennæ black, clavate, as long as the thorax; club testaceous beneath: prothorax a little narrower in front, much longer than broad, with three very slender yellow stripes; underside yellow: segments of the mesothorax and of the metathorax with yellow borders: abdomen nearly as long as the wings, with a tawny stripe on each side; hind borders of the segments tawny: legs testaceous; femora streaked with black: wings limpid, very narrow, pointed; stigma slightly gray, very indistinct

in the hind-wings; veins whitish, slightly ciliated; longitudinal veins with black bands; gradate veinlets black towards the tips of the wings; subcostal areolets simple, and with veins not forked from the base to the stigma; a few brown dots near the tip of the wing and on the forks of the adjoining marginal veinlets in the four wings: fore-wings with two brown dots at one-third of the breadth from the hind border, one above the tip of the fork of the cubitus, the other at the last quadrate areolet by the cubitus: hind-wings narrower and a little longer than the fore-wings. Length of the body 15 lines; of the wings 29 lines.

a. North India. From Mr. Stevens' collection.

73. Myrmeleon vafer.

Nigro-cinereus; facies antice testacea, nigro bimaculata; palpi testacei, apice nigri; antennæ thorace longiores; prothorax antice angustior, multo latior quam longior, testaceo bimaculatus; thoracis et abdominis segmenta testaceo marginata; pedes postici femoribus subtus testaceis, tibiis testaceis apice nigris, tarsis basi testaceis; alæ subcinereæ, longæ, angustæ, subacuminatæ, apice fusco notatæ.

Black, tinged with gray: face towards the mouth testaceous, with two black spots: palpi testaceous, with black tips: antennæ black, subclavate, longer than the thorax: prothorax a little narrower in front, much broader than long, with a testaceous spot on each side of the fore border: segments of the mesothorax and of the metathorax with slightly testaceous borders: abdomen much shorter than the wings, with slightly testaceous borders: legs black; hind-femora testaceous beneath; hind-tibiæ testaceous with black tips; hind-tarsi testaceous at the base: wings slightly gray, long and narrow, slightly pointed; stigma whitish, with an adjoining brown spot in the fore-wings; veins black, with whitish bands; subcostal areolets simple, three of their veins forked before the stigma; a few of the gradate veinlets towards the tip of the wing, and the tip of the fork of the cubitus clouded with brown: hind-wings a little shorter and narrower than the fore-wings; last of the quadrate areolets by the cubitus clouded with brown. Length of the body 11 lines; of the wings 30 lines.

a. New South Wales. Presented by J. W. Evans, Esq.

74. Myrmeleon dirus.

Piceus, robustus, subtus testaceus; caput testaceum, nigro maculatum; antennæ annulatæ, thorace vix breviores; prothorax sublinearis, latior quam longior, testaceo trivittatus; thoracis segmenta testaceo marginata et maculata; abdomen testaceo vittatum; pedes testacei, tarsis nigro annulatis; alæ limpidæ, longæ, angustæ, subacuminatæ, apice fusco notatæ.

Pitchy, testaceous beneath, rather stout: head testaceous, black about the base of the antennæ; vertex with two rows of black spots, fore row with six spots; hind row with eleven spots; some black marks on the hind part: palpi pale testaceous: antennæ pitchy, capitate, nearly as long as the thorax; a testaceous band on the fore border of each joint: prothorax almost linear, with some long white bristles on each side, broader than long, with three testaceous stripes above, the middle one slender, the other two broad, irregular, and each including two pitchy spots: segments of the mesothorax and of the metathorax with testaceous spots in the disks and with testaceous borders: abdomen much shorter than the wings, with an interrupted irregular testaceous dorsal stripe: legs testaceous; joints of the tarsi with black bands: wings limpid, long, narrow, very slightly pointed; stigma whitish, with an indistinct adjoining brown streak in the fore-wings, almost obsolete in the hind-wings; veins whitish, ciliated, with black or pitchy bands; subcostal areolets simple; their veins not forked between the base and the stigma; gradate veinlets and the forks of some of the marginal veinlets towards the tip of the wing indistinctly clouded with brown; a darker brown mark on the outer vein of the last quadrate areolet by the cubitus: hind-wings almost as long as the fore-wings, but much narrower; the brown marks almost obsolete. Length of the body 13 lines; of the wings 33 lines.

a. Ceylon. Presented by R. Templeton, Esq.

75. Myrmeleon lentus.

Fuscus, subtus testaceus; caput testaceum, nigro bifasciatum, vertice nigro maculato, facie flava; prothorax antice angustior, latior quam longior, testaceo trivittatus; thoracis segmenta testaceo maculata et marginata; abdomen testaceo maculatum; pedes testacei, tarsis flavis; alæ hyalinæ, longæ, subangustæ, subacuminatæ, anticæ apice fusco notatæ.

Pale brown, testaceous beneath; head testaceous, with two black bands in front, one above the other below the base of the antennæ; vertex with two bands of black spots; face and palpi pale yellow: prothorax narrower in front, broader than long, with three testaceous stripes, the middle one slender, the other two broad and irregular: segments of the mesothorax and of the metathorax with testaceous borders: abdomen with testaceous spots, mutilated: legs testaceous, with a few slight black marks; hind tibiæ fringed with long hairs; tarsi yellow: wings limpid, long, rather narrow, slightly pointed; stigma small, whitish, with an adjoining small indistinct brownish spot in the fore-wings, almost obsolete in the hind-wings; veins whitish, with a few black or pitchy bands, slightly ciliated; subcostal areolets simple, their veins not forked between the base and the stigma; forks of the marginal veinlets about the tip of the wings and the adjoining gradate veinlets more or less clouded with brown: hind-wings as long as the fore-wings but much narrower, the veinlets above mentioned dark testaceous but not clouded. Length of the wings 32 lines.

a. East Indies. From Archdeacon Clerk's collection.

76. Myrmeleon truculentus.

Testaceus, subrobustus; caput piceo varium, facie flava; prothorax latior quam longior, piceo quinquevittatus; mesothorax et metathorax piceo maculati; abdomen piceum, segmentorum marginibus testaceis; pedes robusti; alæ limpidæ, sublatæ, non acuminatæ, anticæ apice fusco notatæ.

Testaceous, rather stout: head with a pitchy spot between the eyes, and a pitchy band above the base of the antennæ; vertex with three interrupted and irregular pitchy bands; face yellow: prothorax linear, broader than long, with five imperfect pitchy stripes: mesothorax and metathorax with numerous small pitchy spots: abdomen pitchy, much shorter than the wings: hind borders of the segments testaceous: legs testaceous, stout, with a few slight pitchy marks: wings limpid, rather broad, not pointed; stigma whitish, rather large and distinct, with an adjoining very pale brown spot which is hardly visible in the hind-wings; veins white, with black bands, very slightly ciliated; subcostal areolets simple; their veins not forked between the base and the stigma; some veinlets along the cubitus and its sector, some of the gradate veinlets and of the forks of the marginal veinlets near the tip very indistinctly clouded with pale brown; a more distinct mark on a veinlet by the cubitus in the

disk of the wing and a little nearer the base than is the stigma: hind-wings not marked, shorter and narrower than the fore-wings. Length of the body 12 lines; of the wings 28 lines.

a. North India. From Mr. Stevens' collection.

77. Myrmeleon violentus.

Fulvus; capitis vertex nigro maculatus; antennæ ferrugineæ; thorax fusco quadrivittatus; prothorax linearis, multo latior quam longior, fusco quadrimaculatus; abdomen fuscum; pedes fulvi; alæ subhyalinæ, angustæ, subacuminatæ, stigmate flavo.

Tawny: head black about the base of the antennæ; vertex with two bands of black spots: antennæ ferruginous, tawny at the base: prothorax linear, much broader than long, with four brown stripes; inner pair approximate; two brown spots on each side between them and the outer pair: mesothorax and metathorax with four broad irregular brown stripes which are partly connected, and occupy most of the surface: abdomen brown, shorter than the wings: legs tawny; wings subhyaline, narrow, slightly pointed; stigma yellow; veins black, here and there with yellow bands; subcostal areolets simple, their veins not forked between the base and the stigma; a dark brown dot by the last of the quadrate areolets by the cubitus on each of the four wings: hind-wings as long and as narrow as the fore-wings. Length of the body 15 lines; of the wings 32 lines.

a—f. Sandwich Islands. Presented by Capt. Beechey.

78. Myrmeleon acer.

Nigro-cinereus; palpi ferruginei; antennæ thorace breviores; thorax marginibus fulvis; prothorax linearis, multo latior quam longior; pedes nigri, femoribus basi fulvis, tibiis fulvis apice nigris; alæ limpidæ, sat longæ, perangustæ, vix acuminatæ, venis nigris flavo variis.

Black, tinged with gray: mouth tawny: palpi ferruginous: antennæ black, clavate, shorter than the thorax: prothorax linear, convex in front, much broader than long; fore border and hind border tawny: margins of the segments of the mesothorax and of the metathorax slightly tawny: abdomen wanting: legs black; femora towards the base and trochanters tawny; tibiæ tawny, with

black tips: wings limpid, rather long, very narrow, hardly pointed; stigma white, with a brown spot adjoining it in the fore-wings; veins black, with yellow bands; subcostal areolets simple, their veins not forked between the base and the stigma: hind-wings shorter and very little narrower than the fore-wings. Length of the body—? lines; of the wings 28 lines.

a. New Holland.

79. MYRMELEON CAUTUS.

Piceus, subtus testaceus; caput testaceum, nigro bifasciatum, vertice piceo fasciato; antennæ fulvæ, piceo annulatæ, thorace breviores, clava subtus testacea; prothorax testaceus, antice vix angustior, paullo latior quam longior, disco ferrugineo; thoracis segmenta testaceo guttata et marginata; abdomen testaceo notatum, apice appendiculatum; pedes testacei, tibiis tarsisque apice nigris; alæ limpidæ perangustæ, vix acuminatæ, anticæ apice fusco notatæ.

Pitchy, slender: head testaceous, shining in front, with two black bands, one below, the other above the base of the antennæ, the latter with an adjoining white band; vertex tawny with a pitchy band, which is inclined forward at each end: palpi pale yellow, with darker tips: antennæ tawny, clavate, shorter than the thorax, with a pitchy band on the fore border of each joint; club testaceous beneath: prothorax testaceous, hardly narrower in front, a little broader than long; disk mostly ferruginous: segments of the mesothorax and metathorax with some testaceous marks in their disks, and with testaceous borders; under side testaceous: abdomen nearly as long as the wings, with some testaceous marks above, and wholly testaceous beneath towards the base; two curved testaceous filaments at the tip, beset with black bristles: legs testaceous, with black dots; tips of the tibiæ and of the fifth joint of the tarsi black: wings limpid, very narrow, hardly pointed; stigma whitish, with a very small adjoining brown spot in the fore-wings; veins white, slightly ciliated, here and there with black bands; subcostal areolets simple, their veinlets not forked between the base and the stigma; gradate veinlets mostly black, clouded with brown near the border above the cubitus and above the intersection of the first fork of the sector; an oblique brown streak along two veinlets above the fork of the cubitus near the tip: hind-wings not spotted, narrower but hardly shorter than the fore-wings. Length of the body 13 lines; of the wings 26 lines.

a. Brazil. Presented by J. P. G. Smith, Esq.

80. Myrmeleon durus.

Piceo-ferrugineus; caput testaceum, vertice piceo maculato; antennæ piceæ, clavatæ, thorace multo breviores, basi ferrugineæ; prothorax longior quam latior; abdomen alis multo brevius; pedes testacei, tarsorum articulo 5o albido; alæ limpidæ, subangustæ; apice subangulatæ.

Pitchy, ferruginous: head and palpi testaceous; vertex with pitchy spots: antennæ pitchy, clavate, much shorter than the thorax, ferruginous towards the base: prothorax linear, longer than broad: abdomen much shorter than the wings: legs testaceous, slender; fifth joint of the tarsi whitish except at the tip: wings limpid, rather narrow, slightly angular at the tips; stigma indistinct; veins testaceous with darker bands; subcostal areolets simple, their veins not forked between the base and the stigma; marginal region narrow. Length of the body 10 lines; of the wings 22 lines.

a. ——— ?

81. Myrmeleon perfidus.

Testaceus, gracilis; vertex ferrugineus; antennæ ferrugineæ, annulatæ, thorace breviores; thorax brevis; mesothoracis et metathoracis segmenta discis piceis; abdomen nigrum; alæ limpidæ, angustæ, non acuminatæ.

Testaceous, slender: vertex ferruginous: antennæ ferruginous, subclavate, shorter than the thorax; joints testaceous towards the tips: thorax short: prothorax linear, much broader than long: segments of the mesothorax and of the metathorax with pitchy disks: abdomen black: legs testaceous: wings limpid, narrow, not pointed; stigma whitish, indistinct; veins testaceous, ciliated; subcostal areolets short, simple, their veins not forked between the base and the stigma. Length of the body 13 lines; of the wings 26 lines.

a. North India. From Mr. Stevens' cullection.

82. Myrmeleon insidiosus.

Testaceus, gracillimus; antennæ ferrugineæ, apice piceæ, thorace multo breviores; prothorax ferrugineo quadrivittatus; mesothorax et metathorax ferrugineo guttati et bivittati; abdomen ferrugineo bivittatum; tarsi apice nigri; alæ limpidæ, parvæ, non acuminatæ.

Pale testaceous, very slender: antennæ ferruginous, clavate, much shorter than the thorax; club pitchy: prothorax linear, much longer than broad, with two ferruginous stripes on each side, the inner pair shortened in front: mesothorax and metathorax with ferruginous dots on the disks of their segments and with an interrupted ferruginous stripe on each side: abdomen shorter than the wings, with a ferruginous stripe on each side: legs testaceous; third joint of the tarsi with a black tip: wings limpid, rather short and narrow, not pointed; stigma whitish, indistinct; veins white with black bands, slightly ciliated; subcostal areolets simple; their veins very short, not forked between the base and the stigma: hind-wings a little narrower and shorter than the fore-wings. Length of the body 9 lines; of the wings 21 lines.

a. ——— ?

d d.

Venæ 5æ ramus 1us fere longitudinalis, venaque spatio nonnullo parallelus.

83. Myrmeleon Ægyptiacus.

Fuscus, flavo varius, M. formicarii *magnitudine, alis paullo longioribus et angustioribus; caput nigricans, vertice flavo varia, facie flava; prothorax flavus, nigro quinquevittatus; abdomen fuscum; pedes flavi, nigro subnotati; alæ subhyalinæ, anticæ venis fusco-nebulosis, posticæ anticis paullo breviores.*

Myrmeleon Ægyptiacus, *Ramb. Hist. Nat. Ins. Neur.* 393, 13; *Descript. de l'Egypte, Neur.* pl. 3, f. 10, 11.

Egypt.

84. Myrmeleon V-nigrum?

Fuscus; thorace pallide variegato, abdominis segmentis utrinque puncto pallido; alarum anticarum venis quibusdam transversis, infuscatis, fasciam obliquam ante apicem formantibus.

Myrmecoleon Nemansiensis? *Burm. Handb. Ent.* ii. 994, 9.

Myrmeleon V-nigrum? *Ramb. Hist. Nat. Ins. Neur.* 394, 14. (Malaga.)

a, *b*. Port Natal. From Dr. Krauss' collection.

85. Myrmeleon pallidipennis.

Niger; caput fascia lata frontali maculaque verticis nigris; antennæ nigræ, clava subtus testacea; prothorax piceo trivittatus; thorax testaceo varius; pedes testacei; alæ hyalinæ, immaculatæ, venis testaceis fusco annulatis.

Myrmeleon pallidipennis, *Ramb. Hist. Nat. Ins. Neur.* 394, 15.
Myrmeleo plumbeus? *Oliv. Encycl. Méth.* viii. 126, 28. *Brullé, Exp. Scient. de Morée, Ins.* 276, No. 557, pl. 32, f. 1.

a. Malaga. Presented by Benjamin Frend, Esq.
b. Nice. From Dr. Leach's collection.
c. Albania. Presented by W. Wilson Saunders, Esq.

86. Myrmeleon Africanus.

M. pallidipenni *simillimus; vertex nigricans, fascia maculisque quatuor posticis flavis; facies flava; palpi pallidi; antennæ obscure rufæ, basi flavæ; thorax rufo-fuscus, flavo varius; prothorax flavus, vitta fasciisque duabus rufo-fuscis; pedes rufo-fusci, tarsis fusco subannulatis; alæ subæquales, anticæ latiores.*

Myrmeleon Africanus, *Ramb. Hist. Nat. Ins. Neur.* 395, 16.

a. Port Natal. From Dr. Krauss' collection.
b. ——— ? From Mr. Milne's collection.

87. Myrmeleon submaculosus.

Rufo-fuscus, flavo varius, M. formicarii *vix magnitudine,—facies flava; antennæ thoracis longitudine; abdomen immaculatum; pedes rufo-cinerei, fusco varii, tarsis annulatis; alæ hyalinæ, subæquales, anticæ e guttis fuscis seriato lineatæ.*

Myrmeleon submaculosus, *Ramb. Hist. Nat. Ins. Neur.* 396, 17.
Malaga.

88. MYRMELEON MORTIFER.

Cinereo-ferrugineus, gracilis; caput antice et subtus testaceum, vertice nigro trifasciato; palpi testacei, labiales articulo 3o nigro; thorax nigro varius; abdomen vittis duabus marginibusque posticis testaceis; pedes testacei, validi, femoribus tibiisque apice tarsisque nigris, tibiis nigro cinctis, tarsis anticis testaceo cinctis; alæ limpidæ, apice angulatæ, anticæ nigro strigatæ et notatæ.

Grayish ferruginous, slender: head testaceous in front and beneath, with a black spot at the base of each antenna, and with three black bands on the vertex, the hinder bands irregular and composed of black dots: palpi testaceous; third joint of the labial palpi mostly black: antennæ mutilated, testaceous at the base: prothorax linear, with a transverse furrow near the front, a little broader than long, with six interrupted irregular black stripes which are continued as spots on the meso- and metathorax: abdomen shorter than the wings, with a testaceous stripe on each side along two-thirds of the length from the base; hind borders of the segments testaceous: legs testaceous, stout; femora and tibiæ with black tips, and the latter with a black band; tarsi black; fifth joint of the fore-tarsi pale testaceous with a black band; spurs and claws ferruginous: wings limpid, lanceolate, with angular and pointed tips; stigma white, with a very small adjoining brown spot in the fore-wings; veins alternately black and white; subcostal areolets simple, very short at the base, generally without forked veins from thence to the stigma; marginal region rather broad towards the tips: fore-wings with some black dots along the radius and the cubitus, an oblique black streak near the tip of the post-costa, and with another on the gradate veinlets near the tip where the forks of the marginal veinlets are very slightly clouded: hind-wings without marks, shorter, more lanceolate and much narrower than the fore-wings. Length of the body 16 lines; of the wings 34 lines.

a. Port Natal. From M. Gueinzius' collection.

89. Myrmeleon pervigil.

Piceus; caput flavum, nigro varium; palpi flavi, labialium articulo 3o nigro; antennæ ferrugineæ, annulatæ, thorace paullo breviores; pectus testaceum; prothorax testaceo quinquevittatus; mesothorax et metathorax testaceo varius; abdomen nigrum; pedes testacei, tibiis tarsisque apice nigris; alæ hyalinæ, lanceolatæ, acuminatæ, subhamatæ.

Pitchy: head pale testaceous, yellow in front, with a black band about the base of the antennæ; another in front of the vertex, and above the latter two bands of black spots: palpi yellow; third joint of the labial palpi black, with a tawny tip: antennæ ferruginous, clavate, a little shorter than the thorax, with a testaceous band on the fore border of each joint: thorax testaceous beneath: prothorax narrower in front, rather broader than long, with five pale testaceous stripes: segments of the mesothorax and of the metathorax with testaceous streaks in their disks and with testaceous borders: abdomen black, shorter than the wings: legs testaceous, rather stout, with black dots; tips of the tibiæ and of the joints of the tarsi black: wings hyaline, moderately broad, rather long, lanceolate and slightly hooked towards the tips which are pointed; stigma whitish, with an adjoining brown spot in the fore-wings; veins white with black bands, ciliated; subcostal areolets simple, only one of their veins forked between the base and the stigma; gradate veinlets, forks of the marginal veinlets towards the tip of the wing, and some forks of the cubitus and a few transverse veinlets in the disk clouded with brown: hind-wings unspotted, narrower and a little longer than the fore-wings.

Var. Veins more clouded, especially the gradate veinlets, where the brown hue forms two oblique streaks on each wing.

Length of the body 12—13 lines; of the wings 28—30 lines.

a. Port Natal. From M. Gueinzius' collection.
b. Port Natal. From Mr. Stevens' collection.

90. Myrmeleon sedulus.

Testaceus, facie palpisque flavis; antennæ thorace vix breviores; prothorax linearis, multo latior quam longior; abdomen ferrugineum, apice subpiceum, segmentis apice testaceis; alæ albido hyalinæ, angustæ, acuminatæ.

Testaceous: face and palpi yellow: antennæ dark testaceous, clavate, almost as long as the thorax: prothorax linear, much broader than long: mesothorax and metathorax rather short: abdomen ferruginous, shorter than the wings, slightly pitchy towards the tip; hind borders of the segments testaceous: legs testaceous, rather stout: wings whitish, hyaline, narrow, pointed; stigma yellow, indistinct in the hind-wings; veins pale testaceous, hardly ciliated; subcostal areolets simple, their veins not forked between the base and the stigma; hind-wings narrower but very little shorter than the fore-wings. Length of the body 13 lines; of the wings 28 lines.

a. North Bengal. From Miss Campbell's collection.

91. Myrmeleon Lugdunensis.

Fuscus, thorace sulphureo vittato; pedibus sulphureis, extus tarsisque fuscis; costa alarum, subcosta et radio nigris, reliquis venis flavis; stigmatibus magnis flavis.

Myrmeleon lugdunense, *Villers, Ent.* iii. 63. 10. *Oliv. Enc. Méth.* viii. 125, 22.

Myrmeleon lineatum, *Fabr. Ent. Syst. Supp.* 205. *Latr. Gen. Cr. et Ins.* iii. 193, 30.

Myrmecoleon lineatum, *Burm. Handb. Ent.* ii. 993, 1.

a—d. South France. Presented by F. Walker, Esq.
e. South France. From Mr. Walker's collection.
f. Marseilles.
g. Malta. From Dr. Leach's collection.
h—k. ———? From Mr. Children's collection.

c c.

Tibiarum calcaria tarsorum articulis 1o et 2o fere breviores.

d.

Tarsorum articulus 1us 5o brevior.

92. MYRMELEON CONFUSUS.

Sordide flavus, M. formicario *paullo minor; caput rufo-fusco varium; facies flava, apud antennas nigro notata; antennæ rufescentes, thorace longiores; thorax rufo-fusco quadrivittatus; abdomen rufum; pedes rufo-flavi, fusco varii, tarsis annulatis; alæ vix subrufescentes, posticæ angustæ acutæ, anticis paullo longiores.*

Myrmeleon confusus, *Ramb. Hist. Nat. Ins. Neur.* 396, 18.

Africa.

93. MYRMELEON APPENDICULATUS.

Testaceus, fusco variegatus, abdomine supra testaceo, longissimo, alis longiore; his ante apicem obtusiusculum sinuatis.

Myrmeleon appendiculatus, *Latr. Gen. Crust. et Ins.* iii. 193, 5. *Oliv. Enc. Méth.* viii. 124, 19. *Burm. Handb. Ent* ii. 994, 7. *Ramb. Hist. Nat. Ins. Neur.* 397, 19.

Myrmeleon pictus? *Latr. Gen. Cr. et Ins.* iii. 193, 4.

Myrmecoleon pictus? *Burm. Handb. Ent.* ii. 994, 6. *Capite thoraceque flavis, fusco variegatis; abdomine fusco, segmentorum marginibus pallidis; alis ante apicem acutum sinuatis, subcosta pallida, stigmatibus albis; mas cercis brevibus vix prominulis.*

Myrmeleon linearis, *Klug, Symb. Phys. dec.* 4, No. 7, pl. 36, f. 1. *Flavescens, capite inter oculos, thorace striis, abdomine vittis longitudinalibus fuscis, alis fusco reticulatis, stigmate albido.*

a. Marseilles.
b. Spain.

94. Myrmeleon infestus.

Testaceus, gracillimus, piceo varius; caput apud antennas nigricans, facie flava; antennæ graciles, thoracis longitudine, piceo annulatæ et terminatæ; prothorax piceo quadrivittatus; abdomen piceum, lateribus testaceo maculatis; pedes longi, graciles, tibiis apice piceis; alæ limpidæ, amplæ, non acuminatæ, anticæ apice signo ovato fusco bifasciatæ.

Testaceous, very slender: head blackish around the base of the antennæ; face yellow, shining; vertex pitchy behind, and with a slender pitchy band in front: antennæ testaceous, slender, as long as the thorax; joints pitchy towards the base; club pitchy: prothorax nearly linear, a little longer than broad, with four imperfect pitchy stripes: dorsal segments of the mesothorax and of the metathorax pitchy, with testaceous borders and with some testaceous marks on their disks: abdomen pitchy, much shorter than the wings; segments testaceous towards the base on each side: legs pale testaceous, long and slender; tips of the tibiæ pitchy: wings limpid, ample, very iridescent, not pointed; stigma whitish, small in the hind-wings; veins white with black bands, ciliated; subcostal areolets simple, their veins not forked between the base and the stigma; gradate veinlets near the tip and forks of the marginal veinlets at the tip of the wing clouded with pale brown, which forms an irregular and imperfect transverse oval figure on the wing: hind-wings very little narrower and shorter than the fore-wings, with two pale brown marks on the forks of the marginal veinlets, one near the tip, the other near the hind border at three fourths of the length. Length of the body 12 lines; of the wings 30 lines.

a. North India. From Mr. Stevens' collection.

95. Myrmeleon nefandus.

Testaceus; caput ferrugineo guttatum; antennæ ferrugineæ, thorace paullo breviores; prothorax ferrugineo bivittatus et quadrimaculatus; mesothorax et metathorax lateribus guttisque ferrugineis; abdomen ferrugineum, basi testaceum; alæ hyalinæ, acuminatæ, apice fusco notatæ.

Testaceous: head shining in front; vertex with some ferruginous dots: antennæ ferruginous, clavate, a little shorter than the thorax; fore borders of the joints testaceous: prothorax very little narrower

in front, hardly longer than broad, with two ferruginous spots and a ferruginous stripe on each side: mesothorax and metathorax ferruginous on each side, and with ferruginous dots on the disks of their segments: abdomen ferruginous, testaceous towards the base, much shorter than the wings: legs testaceous: wings hyaline, pointed; stigma whitish, indistinct; veins white with black bands; subcostal areolets simple; their veins not forked from the base to the stigma; gradate veinlets towards the tip of the wing, and forks of marginal veinlets along the curve of the hind border clouded with pale brown; the middle part of the branches of some of the forks also clouded: hind-wings marked like the fore-wings, but longer and narrower, and more lanceolate towards the tips. Length of the body 12 lines; of the wings 26 lines.

a. North India. From Mr. Stevens' collection.

96. MYRMELEON ADVERSUS.

Ferrugineus, gracilis; caput subtus testaceum; antennæ thorace paullo breviores; prothorax paullo longior quam latior; abdomen piceum, basi et subtus ferrugineum; pedes testacei, robusti; alæ limpidæ, angustæ, acuminatæ.

Ferruginous, slender: head testaceous towards the mouth and beneath: antennæ ferruginous, subclavate, a little shorter than the thorax: prothorax hardly narrower in front, a little longer than broad: abdomen slightly pitchy, ferruginous beneath and towards the base, a little shorter than the wings: legs testaceous, stout: wings limpid, narrow, pointed: stigma yellowish, indistinct; veins testaceous, slightly ciliated; subcostal areolets simple, their veins very short, not forked between the base and the stigma: hind-wings narrower but hardly shorter than the fore-wings. Length of the body 13 lines; of the wings 26 lines.

a. North India. From Mr. Stevens' collection.

97. MYRMELEON BARBARUS.

Testaceus, gracillimus, piceo varius; antennæ piceæ, graciles, annulatæ, thoracis longitudine; abdomen piceum fasciis maculisque testaceis; pedes longi, graciles; alæ hyalinæ, longæ, angustæ, subacuminatæ, apice fusco notatæ.

Testaceous, very slender: head pitchy about the base of the anteunæ; vertex with six pitchy spots; hind part with two pitchy

spots: palpi pale testaceous: antennæ pitchy, clavate, long and slender, as long as the thorax; a testaceous band on the fore border of each joint; club altogether pitchy, the joints before it wholly testaceous: prothorax linear, almost twice longer than broad, with two irregular pitchy stripes; a transverse furrow on the fore-part: mesothorax and metathorax with three irregular pitchy stripes: abdomen pitchy, much shorter than the wings; segments generally with yellow hind borders and with a yellow spot on each side: legs testaceous, long and slender, with a few black marks: wings hyaline, long and narrow, slightly pointed; stigma white, with a very small brown spot adjoining it in the fore-wings; veins black, slightly ciliated, with whitish bands; subcostal areolets simple, their veins forked from two-thirds of the length to the tip; forks of the marginal veinlets beyond the stigma and along the hind border slightly clouded with brown; some of the gradate veinlets near the tip and at the last of the quadrate areolets by the cubitus, and the fork of the cubitus near its tip, more distinctly clouded: hind-wings narrower and a little longer than the fore-wings; gradate veinlets near the tip clouded with dark brown; forks of the marginal veinlets along the hind border from two-thirds of the length to the tip clouded with pale brown. Length of the body 12 lines; of the wings 28 lines.

a, *b*. Ceylon. From the Rev. J. Wenham's collection.

98. Myrmeleon desperatus.

Nigro-piceus, facie palpisque testaceis; antennæ nigræ, flavo annulatæ; prothorax latior quam longior, antice subangustior; mesothorax testaceo marginatus; abdominis segmenta marginibus posticis testaceis; pedes testaceo notati, postici testacei nigro varii; alæ hyalinæ, longæ, perangustæ, non acuminatæ, apice fusco notatæ.

Pitchy black: face and palpi testaceous: antennæ black, mutilated, with a yellow band on the fore border of each joint, and two yellow rings at the base; prothorax broader than long, slightly narrower in front: mesothorax with a testaceous hind border: abdomen much shorter than the wings; hind borders of the segments pale testaceous: anterior legs black, with a few testaceous marks; hind-legs testaceous; femora above and tarsi except at the base black: wings hyaline, moderately long, very narrow, not pointed; stigma whitish, with an adjoining brown spot in the fore-wings; veins black, with whitish bands, ciliated; subcostal areolets simple, their

veins not forked between the base and the stigma; gradate veinlets and the forks of a few marginal veinlets about the tips of the wings, and the veins at the tip of the fork of the cubitus clouded with brown: hind-wings not clouded, narrower but not shorter than the fore-wings. Length of the body 9 lines: of the wings 25 lines.

a. New Holland.

99. Myrmeleon perniciosus.

Nigro-piceus, gracilis; facies flava; palpi testacei; antennæ flavo subannulatæ, thoracis longitudine; prothorax testaceo trivittatus; mesothoracis et abdominis segmentorum margines postici flavi; pedes graciles, femoribus tibiisque basi testaceis, tibiis posticis supra et tarsis posticis basi albidis; alæ hyalinæ, angustæ, sublanceolatæ, apice vix angulatæ.

Pitchy black, slender: face pale yellow: palpi testaceous: antennæ black, slender, clavate, as long as the thorax; fore borders of the joints to the club indistinctly yellow; prothorax linear, broader than long, with three very slight testaceous stripes: hind border of the mesothorax and of the abdominal segments yellow: abdomen much shorter than the wings: legs black, slender; femora and tibiæ at the base and coxæ testaceous; hind tibiæ above and hind tarsi at the base whitish: wings hyaline, narrow, slightly lanceolate but hardly angular at the tips; stigma whitish; veins black, with white bands; subcostal areolets simple, with two or three occasional forked veins near the stigma; marginal region narrow: fore-wings with the tip of the fork of the cubitus, the gradate veinlets and the forks of a few marginal veinlets near the tip clouded with brown: hind-wings longer and much narrower than the fore-wings. Length of the body 8 lines; of the wings 24 lines.

a. ——— ?

100. Myrmeleon abditus.

Flavus, gracilis, nigro vittatus; caput nigro fasciatum, vertice piceo quadriguttato; antennæ fulvæ, apice ferrugineæ, thoracis longitudine; abdomen piceum, segmentorum marginibus posticis ventreque flavis; alæ limpidæ, parvæ, non acuminatæ, posticæ vitta brevi subapicali fusca.

Yellow, slender: head with a black band about the base of the antennæ; vertex with four pitchy spots, one in front, one behind, and one on each side; face pale yellow: antennæ tawny, clavate, as

long as the thorax; clubs ferruginous: prothorax linear, a little longer than broad, with four black stripes; the outer pair remote from the inner pair: mesothorax and metathorax with three black stripes above, and with two on each side beneath, all much interrupted: abdomen pitchy, shorter than the wings; hind borders of the segments and under side yellow: legs yellow; claws red: wings limpid, rather short and narrow, not pointed; stigma tawny; veins white, slightly ciliated; longitudinal veins with black bands; subcostal areolets simple, their veins not forked between the base and the stigma; hind-wings a little narrower and shorter than the fore-wings, with a brown streak near the tip and parallel to the hind border, and extending along the base of the marginal veinlets. Length of the body 8 lines; of the wings 20 lines.

a. New Holland. Presented by the Haslar Hospital.

d d.

Tarsorum articulus 1us 5o non brevior.

101. MYRMELEON NIGROCINCTUS?

Piceo-testaceus, gracillimus; caput nigro fasciatum; antennæ piceæ, graciles, subfiliformes, testaceo annulatæ; abdomen nigrum, basi contractum; alæ limpidæ, angustæ, subacuminatæ, apicem versus fusco maculatæ.

Myrmeleon nigrocinctus? *Ramb. Hist. Nat. Ins. Neur.* 298, 20.

Allied to *M. pulchellus*. Testaceous, very slender: head with a black shining band about the base of the antennæ: antennæ pitchy, long, slender, almost filiform, rather longer than the thorax; joints testaceous in front, those adjoining the club wholly testaceous: prothorax narrower in front, longer than broad: disk of the mesothorax and of the metathorax somewhat pitchy; abdomen black, slender, contracted towards the base, much shorter than the wings: legs long, slender, testaceous: wings limpid, narrow, slightly pointed; stigma whitish; veins white with a few black bands, ciliated; subcostal areolets simple; many of their veins forked between one-third of the length of the wing and the stigma; transverse veinlets between the radius and its sector, forks of some marginal veinlets above the tip, and of others near the hind border towards the tip, clouded with brown; two brown spots on the fore border near the tip, and some small brown spots along the hind border: hind-wings a little longer and narrower than the fore-wings, adorned

near their tips with two brown spots on the fore border and some smaller ones on the hind border. Length of the body 9½—10 lines; of the wings 26—28 lines.

a. Australia. From Mr. Milne's collection.
b, *c*. ——— ?

102. Myrmeleon tacitus.

Piceus, gracilis; caput nigrum, facie flava; palpi fulvi; prothorax testaceo vittatus; pedes longi, graciles, tarsis basi tibiisque posticis testaceis, his apice nigris; alæ limpidæ, longæ, angustæ, subhamatæ, vix acuminatæ, anticæ fusco confertim guttatæ, posticæ apice fusco maculatæ.

Pitchy, slender, mutilated: head black, with a yellow streak in front by each eye; face yellow: palpi tawny: prothorax narrower in front, longer than broad, with a slender testaceous dorsal stripe: mesothorax and metathorax with testaceous hind borders: legs long, slender, pitchy; tarsi testaceous at the base; hind-tibiæ testaceous, with pitchy tips: wings limpid, long, narrow; tips very slightly hooked, hardly pointed; stigma whitish, indistinct, with a long adjoining brown spot; veins white in the colourless parts; subcostal areolets simple, with a few forked veins near the stigma: fore-wings from the subcosta to the hind border covered with numerous small brown spots of various form which are confluent in the disk behind the stigma: hind-wings a little narrower but hardly shorter than the fore-wings, without marks on three-fourths of the length except a few brown dots along the radius and the cubitus; behind the stigma the spots are clustered together as in the fore-wings, and form an irregular band which emits a branch to the tip of the wing, and there are two distinct spots above this branch. Length of the wings 46 lines.

a. East Indies. From Archdeacon Clerk's collection.

c c c.

Tibiarum calcaria fere recta, tarsorum articuli 1i longitudine, vel articulorum 1i et 2i vix longitudine. Tarsorum articulus 1us 5o plus minusve brevior.

d.

Tibiarum calcaria tarsorum articulis 1o et 2o fere breviora.

103. Myrmeleon flavus.

Flavus, fusco trivittatus, M. formicarii *magnitudine, alis latioribus obtusioribus; caput inter antennas nigro maculatum; palpi apice nigri; antennæ rufo-fuscæ, apice obscuriores; tarsi nigro annulati; alæ flavescentes, venis rufescentibus.*

Myrmeleon flavus, *Ramb. Hist. Nat. Ins. Neur.* 398, 21.

a, b. Albania. Presented by W. Wilson Saunders, Esq.
c. South Russia.
d, e. ——— ?

104. Myrmeleon atomarius.

Flavus, M. formicario *paullo minor; vertex quadrimaculatus; antennæ thorace paullo breviores; thorax interrupte trivittatus; abdomen rufo-fuscum, maris appendicibus dorsalibus ciliatis recurvis; alæ breves, sat latæ, flavescentes, atomis marginalibus conspersæ.*

Myrmeleon atomarius, *Ramb. Hist. Nat. Ins. Neur.* 399, 22.

Senegal.

105. Myrmeleon angusticollis.

Niger, M. formicario *minor; facies flava; palpi flavescentes, labiales articulo 3o nigro notato; antennæ rufescentes, nigro cinctæ; prothorax angustus, subcylindricus, maculis duabus anticis lateralibus flavis; pedes longi, flavescentes, hirsuti, nigro varii; alæ parvæ, subæquales, breves, ciliatæ, rufo-fusco maculatæ, venulis furcatis apicalibus paucis.*

Myrmeleon angusticollis, *Ramb. Hist. Nat. Ins. Neur.* 399, 23.

Bombay.

106. Myrmeleon variegatus.

Pallidus; capite thoraceque lineis, abdomine vittis longitudinalibus apiceque fuscis; alis lanceolatis, hyalinis, venis lineisque transversis denticulatis nigris, stigmate albo.

Myrmeleon variegatus, *Klug, Symb. Phys. dec.* 4, pl. 30, f. 4. *Ramb. Hist. Nat. Ins. Neur.* 400, 24.

a. South France. Presented by the Entomological Club.
b. Marseilles.

107. MYRMELEON TAPPA.

Piceus; caput flavo varium; antennæ fuscæ, fulvo annulatæ; prothorax lineari, paullo longior quam latior, flavo trivittatus; pedes testacei; alæ longæ, angustæ, subhyalinæ, subacuminatæ, stigmate roseo, anticarum apicibus marginibusque posticis fusco guttatis.

Male. Pitchy: head yellow towards the mouth; vertex yellow with pitchy spots: antennæ brown, clavate, a little longer than the head and the thorax, with a tawny ring on each joint except at the tip: prothorax linear, a little longer than broad, with three yellow stripes which extend over part of the mesothorax: abdomen shorter than the wings, with a tuft of black hairs at the tip: legs testaceous: wings long and narrow, subhyaline, slightly pointed: hind-wings a little longer and narrower than the fore-wings; stigma rosy, indistinct; veins pale yellow, with numerous black bands which are chiefly on the junctions or forks of the veins; all the subcostal areolets simple; a brown dot on the base of the fork of each marginal veinlet towards the tip of the wing. Length of the body 16 lines; of the wings 38 lines.

a—d. Nepaul. From the Hardwicke bequest.

108. MYRMELEON MALEFIDUS.

Niger, gracilis; caput flavo notatum; palpi pallidi; antennæ graciles, fere capitatæ, testaceo annulatæ, thoracis longitudine; thorax testaceo marginatus; prothorax testaceo trivittatus; abdominis segmenta testaceo marginata; pedes testacei, nigro varii; alæ subcinereæ, longæ, angustæ, striga postica obliqua fusca signatæ, apice fusco notatæ.

Black, slender: head with a yellow ring around the base of each antenna, and with a yellow spot on each side between the eye and the face, which is testaceous: palpi testaceous, partly ferruginous: antennæ slender, as long as the thorax, almost capitate; fore borders of the joints testaceous; club broad: prothorax hardly narrower in front, broader than long, with a dull testaceous border

and three dull testaceous stripes: mesothorax and metathorax with testaceous hind borders: abdomen much shorter than the wings; hind borders of the segments testaceous: legs testaceous, with black bands; tarsi black, testaceous at the base; fore-tarsi sometimes partly testaceous: wings slightly gray, long and narrow; stigma whitish, with an adjoining dark brown spot in the fore-wings; veins black with white bands, ciliated; subcostal areolets simple, with two or three forked veins near the stigma: a few of the gradate veinlets and of the adjoining forks of the marginal veinlet near the tip of the wing clouded with brown, one of the dots on the former near the hind border, and the most remote from the tip of the wing is darker than the rest; a short brown streak rising obliquely outward from the tip of the fork of the cubitus: hind-wings shorter and narrower than the fore-wings, without marks, excepting a short streak at two-thirds of the length, near and parallel to the hind border. Length of the body 10 lines; of the wings 32 lines.

a, *b*. Van Dieman's Land. From Dr. Hooker's collection.
c. New Holland.

109. Myrmeleon infidus.

Flavus, nigro vittatus; caput piceo trivittatum; abdomen piceum testaceo varium; pedes flavi, longi, graciles; alæ limpidæ, angustæ, vix acuminatæ, anticæ apice fusco notatæ, posticæ striga postica fusca subapicali.

Yellow: head with a broad pitchy band about the base of the antennæ: an irregular interrupted pitchy band above this, and another more interrupted in front of the vertex; two pitchy dots above the latter: antennæ mutilated, yellow at the base: prothorax almost linear, a little longer than broad, with three black stripes, the middle one very slender, the other two broad behind, shortened in front; under side with two black stripes: mesothorax and metathorax with three interrupted irregular black stripes on each side, one above and two below: abdomen pitchy with testaceous marks, mutilated: legs yellow, rather long and slender: wings limpid, rather narrow, hardly pointed; stigma yellowish; veins whitish, slightly ciliated: subcostal and radial veins pale yellow, the former with pale brown bands; subcostal areolets simple, their veinlets not forked between the base and the stigma; forks of the marginal veinlets at the tip of the wing clouded with brown: hind-wings very little shorter and narrower than the fore-wings, with a brown streak about one-fourth of the length of the wing, near the tip and

not far from the hind border to which it is slightly oblique. Length of the body 10? lines; of the wings 28 lines.

a. Gambia. Presented by — Rendall, Esq.

110. Myrmeleon acerbus.

Flavus; caput nigro varium; antennæ nigræ, apice subfulvæ; prothorax multo longior quam latior, antice paullo angustior, nigro quinquevittatus; thorax nigro trivittatus; abdomen nigro univittatum; alæ limpidæ, breviusculæ, sat latæ, non acuminatæ, stigmate flavo.

Yellow: head black about the base of the antennæ; vertex with a black spot on each side; hind part with a black dorsal stripe, and a black dot on each side: palpi partly ferruginous towards their tips: antennæ black, clavate, much shorter than the thorax; club tawny on the outer side: prothorax a little narrower in front, very much longer than broad, with five black stripes; the inner pair shorter than the outer pair, and not more than half the length of the prothorax: mesothorax and metathorax with three interrupted black stripes; the lateral pair forked in front and united to the dorsal one: abdomen almost as long as the wings, with a black stripe above and beneath; tip blackish, that of the male with six black ciliated appendages, which terminate in setæ: abdomen of the female furnished towards the tip with two successive tufts of silky testaceous hairs: legs yellow: wings limpid, moderately broad, rather short, not pointed; stigma yellow, indistinct in the hind-wings; veins black, with pale bands; subcostal areolets simple, their veins not forked between the base of the wing and the stigma; in this species there is a sector which has its origin above the fifth fork of the first sector, to which it is at once united: hind-wings shorter and narrower than the fore-wings. Length of the body 12—14 lines; of the wings 26—28 lines.

a—c. North India. From Mr. Stevens' collection.

111. Myrmeleon mendax.

Niger; vertex flavo bivittatus et bifasciatus; palpi flavo-ferruginei; antennæ piceæ, thorace multo breviores, basi flavæ; prothorax flavus, linearis, latior quam longior, nigro quadrivittatus; thoracis segmenta flavo maculata et marginata; abdominis segmenta nigro terminata; pedes flavi, tibiis, tarsisque apice femoribusque apice piceis; alæ subhyalinæ, angustæ, vix acuminatæ.

Black: vertex with two yellow stripes which are united behind by means of an arched band, and are connected by a short band on each side with a yellow circle round each eye: palpi yellow; first joint ferruginous at the tip; second pitchy in the middle; third ferruginous: antennæ pitchy, clavate, much shorter than the thorax, yellow towards the base: prothorax yellow, linear, broader than long; dorsum with four irregular black stripes which are partly connected: mesothorax and metathorax with a yellow spot on each disk; their segments with yellow borders: abdomen shorter than the hind borders of the segments, yellow: legs yellow; tibiæ and tarsi with pitchy tips; hind-femora mostly pitchy: wings subhyaline, narrow, hardly pointed; stigma yellowish, with an adjoining brown spot in the fore-wings; veins pale yellow with black bands, slightly ciliated; subcostal areolets simple, their veins not forked between the base and the stigma: hind-wings almost as long as the fore-wings and very little narrower. Length of the body 11 lines; of the wings 26 lines.

a. ——— ?

112. MYRMELEON SOLERS.

Nigro-cinereus, gracilis; caput atrum, facie palpisque maxillaribus testaceis, labialibus fulvis; antennæ clavatæ, basi testaceæ; prothorax latior quam longior, margine antico lateribusque testaceis; pedes picei, tibiis supra femoribus tarsisque basi coxisque testaceis; alæ hyalinæ, mediocres, apice subangulatæ.

Black, slender: head deep black with a yellow circle round each eye and round the base of each antenna; face and maxillary palpi testaceous; labial palpi tawny: antennæ black, clavate, testaceous at the base, shorter than the thorax: prothorax broader than long, rather narrower in front, testaceous along each side and on the fore border: abdomen shorter than the wings: legs pitchy, slender; tibiæ above, femora and tarsi towards the base and coxæ testaceous: wings hyaline, of moderate size, obtusely angular at the tips; stigma white; veins white, some of the longitudinal veins with black bands; subcostal areolets simple, with one or two forked veins by the stigma; marginal region narrow: hind-wings a little shorter and narrower than the fore-wings. Length of the body 10 lines; of the wings 24 lines.

a. China. Presented by J. C. Bowring, Esq.

d d.

Tibiarum calcaria tarsorum articuli 1i longitudine aut paullo breviores.

e.

Palporum labialium articulus ultimus clavam acuminatam fingens, 2us palpis maxillaribus vix brevior.

113. Myrmeleon formicarius.

Fuscus; thorace variegato; pedibus testaceis annulatis; segmentorum abdominalium margine pallido; alis anticis maculatis, stigmate albo, posticis ad marginem anticum bimaculatis.

Hemerobius formicaleo, *Linn. Syst. Nat. ed.* x. 550, 4.
Myrmeleon formicarius, *Linn. Faun. Suec.* 1509; *It. Œl.* 149, 206; *Syst. Nat.* ii. 914, 3. *Roes. Ins.* iii. pl. 20, f. 25, 26. *Geoffr. Ins. Par.* ii. 258. pl. 14. *Fabr. Mant. Ins.* 249, 5; *Sp. Ins.* ii. 93, 5; *Ent. Syst.* ii. 93, 5. *Vallisn. Op.* i. 77, 2. *Reaum. Ins.* iv. pl. 11, f. 6, pl. 14, f. 18, 19, pl. 32—34. *Sulz. Ins.* pl. 17, f. 105. *Poda, Ins.* pl. 1, f. 8. *Schæff. Elem.* pl. 65. *Icon. Ins. Ratisb.* pl. 22, f. 1, 2. *Gmel. Ed. Syst. Nat.* i. 5, 2643, 3. *Oliv. Enc. Méth.* viii. *Barbut, Gen. Ins. Linn.* 221, pl. 12. *Stew. El. Nat. Hist.* ii. 217, pl. 7, f. 12—15. *Turt. Syst. Nat.* iii. 404. *Wood, Ill. Lin. Gen. Ins.* ii. 32, pl. 50. *Latr. Gen. Cr. et Ins.* iii. 191, 2. *Cuv. Règn. Anim.* v. 249. *Lam. Hist. Nat. Anim. Invert.* iv. 210, 1. *Panz. Faun. Ins. Germ.* xciii. 11. *Ramb. Hist. Nat. Ins. Neur.* 401, 25. *Crochard, Ed. Cuv. Règ. Anim. Ins.* 97, pl. 103, f. 1.
Hemerobius formicarius, *Berk. Syn.* i. 152.
Formicaleo formicarius, *Leach, Edin. Encycl.* ix. 138.
Myrmecoleon formicarius, *Burm. Handb. Ent.* ii. 996, 15.

a—e. ——— ?

114. Myrmeleon inopinus.

Niger; caput antice subtusque flavum; palpi labiales flavi, apice nigri; prothorax testaceus, sublinearis, paullo longior quam latior, piceo fasciatus; thoracis et abdominis segmenta testaceo marginata; pedes flavi, femoribus apice tibiis subtus tarsisque nigris; alæ hyalinæ, angustæ, non acuminatæ.

Black, slender, covered with whitish down: head shining in front, with a yellow interrupted circle round each eye and with another round the base of each antenna; vertex with a longitudinal furrow; face and underside yellow: labial palpi yellow; last joint black: maxillary palpi mostly black: antennæ black, clavate, shorter than the thorax: prothorax testaceous, almost linear, a little longer than broad, pitchy about the fore border, and with a broad curved pitchy band on the disk: segments of the mesothorax and of the metathorax with testaceous borders: abdomen shorter than the wings; hind borders of the segments testaceous: legs pale yellow; femora towards the tips, tibiæ beneath, and tarsi black: wings hyaline, narrow, not pointed; stigma white, with an adjoining brown spot in the fore-wings; veins black, with yellow bands, ciliated; subcostal areolets simple, their veins not forked between the base and the stigma; hind-wings a little shorter and narrower than the fore-wings. Length of the body 13 lines; of the wings 26 lines.

a. Van Dieman's Land. Presented by R. Butler, Esq.

e e.

Palparum-labialium articulus ultimus acuminatus, fusiformis vel conicus; articulus 2us palpis maxillaribus multo brevior.

115. Myrmeleon lanceolatus.

Testaceus, gracilis; antennæ piceæ, annulatæ, caput nigro varium; abdomen elongatum, apicem versus piceum; alæ hyalinæ, longæ, angustæ, venis totis pallidis.

Myrmeleon lanceolatus, *Ramb. Hist. Nat. Ins. Neur.* 401, 26.

a—d. Sierra Leone. Presented by the Rev. D. F. Morgan.

116. Myrmeleon notatus.

Testaceus, gracilis, piceo varius; antennæ piceæ, graciles, annulatæ; abdomen piceo fasciatum; pedes testacei, longi, graciles; alæ hyalinæ, anticæ macula mædia postica guttdque discali substigmaticali fuscis.

Myrmeleon notatus, *Ramb. Hist. Nat. Ins. Neur.* 402, 27.

Malaga; Senegal.

a. ———?

117. Myrmeleon lineola.

Pallidus vel cinereus, M. notato *simillimus ; thorax fusco quadrivittatus ; abdomen fuscum, segmentorum omnium marginibus posticis 3ique maculis duabus flavis ; pedes testacei atomis nigris, tarsis longis nigro cinctis ; alæ longæ, subæquales, perangustæ*, M. notati *alis similes, at aliter maculatæ et venosæ.*

Myrmeleon lineola, *Ramb. Hist. Nat. Ins. Neur.* 402, 28.

118. Myrmeleon obscurus.

M. formicario *minor ; palpi pallidi, labiales articulo 3o fusiformi fusco ; thorax nigricans, flavo marginatus ; prothorax rufo-flavus, longus, fusco trivittatus ; abdomen nigricans, segmentis rufo-flavo maculatis ; pedes testacei, fusco notati ; alæ hyalinæ, apice obtusæ, posticæ paullo breviores.*

Myrmeleon obscurus, *Ramb. Hist. Nat. Ins. Neur*, 403, 29.
Mauritius.

119. Myrmeleon capensis.

Nigricans, M. formicarii *magnitudine ; caput nigrum, occipite rufescente nigro trivittato, epistomate flavo ; antennæ breves, rufescentes ; prothorax brevis, flavo interrupte quadrivittatus ; pedes flavo varii ; alæ hyalinæ, angustæ, sat longæ, posticæ paullo breviores.*

Myrmeleon capensis, *Ramb. Hist. Nat. Ins. Neur.* 404, 30.
Myrmeleon capensis ? *Thunb. Nov. Ins. Sp.* 479, f. 91. *Gmel. Ed. Syst. Nat.* i. 5, 2643, 10.

Cape.

120. Myrmeleon ochroneurus.

Flavus, nigro-varius, M. formicarii *magnitudine aut paullo major, alis longioribus ; antennæ breves ; thorax nigro univittatus ; abdomen nigricans, segmentorum marginibus posticis flavis ; pedes flavi, tarsis rufescente-cinctis ; alæ longæ, hyalinæ, sat acuminatæ, posticæ paullo breviores.*

Myrmeleon ochroneurus, *Ramb. Hist. Nat. Ins. Neur.* 404, 31.
Cape.

121. Myrmeleon punctulatus.

Flavus, nigro trivittatus, M. formicarii *magnitudine; palpi apice nigri; antennæ rufo-fuscæ, thorace breviores; abdomen cyanescente-fusco quinquevittatum; pedes flavi, nigro notati, tarsis subannulatis; alæ latæ, obtusæ subflavescentes.*

Myrmeleon punctulatus, *Ramb. Hist. Nat. Ins. Neur.* 405, 32.

Bengal.

122. Myrmeleon tenuipennis.

Fuscus, M. formicario *paullo minor; caput nigrum, verticis maculis duabus et epistomate flavis; prothorax flavo trivittatus; mesothorax et metathorax marginibus posticis flavis; abdominis latera flavo subvaria; pedes flavi, fusco conspersi, tarsis fusco annulatis; alæ longæ, angustæ, posticæ anticis paullo longiores.*

Myrmeleon tenuipennis, *Ramb. Hist. Nat. Ins. Neur.* 405, 33.

Bombay.

123. Myrmeleon innotatus.

Nigro-piceus; caput nigrum, facie antica flava; palpi nigri; antennæ nigræ, thorace breviores; thoracis latera flavo varia; pedes testacei, femoribus tibiisque apice tarsisque nigris; alæ hyalinæ, immaculatæ.

Myrmeleon innotatus, *Ramb. Hist. Nat. Ins. Neur.* 406, 34.

Var.? *Fuscus, thoracis segmentis in margine pallidis; alis latiusculis, in apice summo subobtusis, stigmatibus albis.*

———? *Roesel, Ins.* iii. pl. 21, f. 2. *Deg. Ins.* iii. 564, 1, pl. 27, f. 8.

Myrmeleon Formicalynx, *Linn. Syst. Nat.* ii. 914, 4. *Fabr. Sp. Ins.* i. 399, 5; *Mant. Ins.* i. 250, 8; *Ent. Syst.* ii. 94, 8. *Gmel. Ed. Syst. Nat.* i. 5, 2644, 4. *Oliv. Enc. Méth.* viii.

Myrmecoleon Formicalynx, *Burm. Handb. Ent.* ii. 994, 4.

Germany, Hungary.

a. ———? From Mr. Children's collection.

b. ———?

124. Myrmeleon incertus.

Fuscus; thoracis vitta indistincta, marginibus et segmentorum marginibus, necnon abdominis segmentorum marginibus posticis flavis; caput posticum nigrum; palpi flavi, apice nigri; antennæ fuscæ, breves; pedes testacei, tarsis nigris; alæ hyalinæ, maris posticæ plantula postica basali nulla.

Myrmeleon incertus, *Ramb. Hist. Nat. Ins. Neur.* 407, 35.

South France?

125. Myrmeleon inconspicuus.

Nigricans; palpi flavi, apice nigri; antennæ fuscæ, breves; prothorax vitta maculisque duabus flavis; abdominis segmentorum margines postici flavescentes; pedes testacei, tarsis nigris; alæ hyalinæ, maris posticæ plantula postica basali.

Myrmeleon inconspicuus, *Ramb. Hist. Nat. Ins. Neur.* 406, 36.

a. ? ——— ? From Mr. Milne's collection.

South France?

126. Myrmeleon distinguendus.

Fuscus, flavo varius, M. formicario *minor; caput nigrum; vertex flavus vitta maculisque quatuor nigris; fascia antica flava; palpi flavescentes, apice nigri; antennæ rufescentes apice fuscæ, thorace breviores; prothorax flavus, vitta fasciisque duabus fuscis; mesothoracis et metathoracis margines postici flavi; abdomen nigrum, segmentorum marginibus posticis flavescentibus; pedes flavescentes, fusco varii, sat longi; alæ albicantes.*

Myrmeleon distinguendus, *Ramb. Hist. Nat. Ins. Neur.* 407, 37.

Malaga; Senegal.

127. Myrmeleon Leachii.

Fuscescens, flavido maculatus; oculis cupreis; pedibus brevibus pallidis, tarsis simplicibus, unguiculis mediocribus; alis hyalinis subfalcatis immaculatis, venis ciliatis.

Formicaleo Leachii, *Lansdown Guilding, Trans. Linn. Soc. Lond.* xvi. 49, 1.

a, *b*. Jamaica.
c.
d, *e*. ——— ?

128. Myrmeleon tristis.

Flavus; caput nigro varium; palpi apice nigri; antennæ nigræ; thorax nigro quadrivittatus; abdomen fuscum; pedes nigro strigati; alæ latæ, subacuminatæ, subcinereæ, apice obscuriores, stigmate flavo.

Yellow: front and face mostly black; vertex with three black spots; a semicircular black spot towards the mouth: palpi with black tips: antennæ black, slender, subclavate, acuminate, much shorter than the thorax: prothorax linear, much longer than broad, with two black stripes above, and with two beneath, the latter pair shortened in front: mesothorax and metathorax with four irregular black stripes, the outer pair interrupted: abdomen brown, slender, much shorter than the wings: legs yellow; femora and tibiæ with black streaks: wings broad, very slightly pointed, very slightly gray, a little darker about the stigma; hind-wings shorter and narrower than the fore-wings; stigma yellow, distinct; veins black; subcostal areolets divided by transverse veinlets from half the length of the wing to the stigma; their veins forked from a little beyond half the length to the stigma. Length of the body 16 lines; of the wings 36 lines.

a: Congo. Presented by Sir John Richardson.
b. ——— ? From Mr. Milne's collection.
c, *d*. ——— ?

129. Myrmeleon lethalis.

Flavus; caput nigro varium; antennæ nigræ; thorax nigro quadrivittatus; abdominis dorsum fuscum, flavo vittatum; alæ subhyalinæ, angustæ, acuminatæ, anticarum basi margineque postico fusco guttatis, stigmate flavo.

Yellow: front and face mostly black; vertex with a black spot on each side, and with three black stripes which are connected in the middle by a black band: palpi yellow: antennæ black, slightly subclavate, very much longer than the thorax, with three yellow rings at the base: prothorax linear, much longer than broad, with four black stripes: mesothorax and metathorax with three black stripes: abdomen brown, much shorter than the wings, with a narrow yellow dorsal stripe; under side yellow: legs yellow, with a few black dots: wings subhyaline, narrow, pointed, grayish at the tips; stigma pale yellow, partly brown in the fore-wings; veins black; subcosta, radius, and its sectors, and some other veins with numerous yellow bands; transverse veinlets of the fore-wings clouded with brown towards the base and along part of the hind border; a small transverse dark brown spot by the last of the quadrate areolets adjoining the cubitus; subcostal areolets simple; their veins not forked from the base to the stigma: hind-wings longer and narrower than the fore-wings; a little dark brown spot between the eighth and ninth forks of the sector beneath the stigma. Length of the wings 40 lines.

a. Port Natal. From M. Gueinzius' collection.
b, *c*. Port Natal. From Mr. Stevens' collection.

130. Myrmeleon lethifer.

Niger; caput flavo quadrimaculatum; prothorax multo longior quam latior, antice paullo angustior, dorso nigro; scutelli abdominisque segmentorum margines postici flavi; pedes fulvi; alæ subhyalinæ, sat latæ, subacuminatæ, stigmate nullo.

Black: head with four yellow spots, two on the vertex and two behind: mouth and palpi ferruginous: antennæ black, clavate, shorter than the thorax: prothorax much longer than broad, a little narrower in front, yellow on each side and beneath and along the hind border: hind border of the scutellum of the mesothorax and of the metathorax yellow: abdomen shorter than the wings; hind borders of the segments yellowish: legs tawny: wings subhyaline,

moderately broad, slightly pointed; no stigma; veins testaceous, very slender, ciliated; subcostal areolets divided by veinlets beyond the middle, their veins forked from thence to the stigma: hind-wings a little longer and narrower than the fore-wings. The origin of the first sector of the radius in this species is variable, in some cases it springs distinctly from the radius by the eighth subradial areolet; in others it appears to commence at half the distance between the radius and the second sector. Length of the body 13—14 lines; of the wings 28—30 lines.

a—b. Port Natal. From M. Gueinzius' collection.
c—e. Port Natal. From Mr. Stevens' collection.

131. Myrmeleon secretus.

Piceus, gracilis; caput nigrum, vertice fulvo nigro maculato, facie fulva flavo fasciata; palpi testacei, labiales apice picei; antennæ nigro-piceæ, thorace breviores, ferrugineo vittatæ; prothorax fulvo bivittatus, multo latior quam longior; abdomen fulvo maculatum; pedes nigro-testacei; alæ limpidæ, angustæ, vix acuminatæ.

Pitchy, slender: head black, flat above the base of the antennæ, very shining below; vertex tawny, with six black spots in two bands; face tawny, with a pale yellow band; a yellow circle round each eye: palpi testaceous; labial palpi much longer than the maxillary palpi; third joint pitchy: antennæ pitchy, black, clavate, shorter than the thorax, with a ferruginous stripe from the base to the club: prothorax linear, much broader than long, with two tawny interrupted stripes which are widened on the fore border and extend along the sides of the first division of the prothorax: mesothorax and metathorax with testaceous hind borders: abdomen shorter than the wings, with six oblong, tawny, dorsal spots: anterior legs black; anterior femora and middle tibiæ with testaceous streaks: hind-legs testaceous; femora and tibiæ with black streaks; tarsi black, testaceous at the base: wings limpid, narrow, hardly pointed; stigma whitish; veins white, with black bands, ciliated; transverse veinlets with black dots; subcostal areolets simple, their veins not forked from the base to the stigma excepting the vein adjoining the latter: hind-wings a little narrower and shorter than the fore-wings. Length of the body 12½ lines; of the wings 27 lines.

a. Port Natal. From M. Gueinzius' collection.

132. Myrmeleon implexus.

Testaceus, gracilis; caput ferrugineo varium, facie palpisque flavis; antennæ fulvæ, thorace multo breviores, clava supra ferruginea; prothorax ferrugineo trivittatus; mesothorax et metathorax piceo maculati; abdomen piceum, testaceo vittatum; pedes flavi; alæ limpidæ, subangustæ, perbreves, non acuminatæ.

Testaceous, slender: vertex with a ferruginous stripe on the disk, and with two ferruginous spots on each side; face and palpi yellow: antennæ tawny, clavate, much shorter than the thorax; club ferruginous above: prothorax linear, much broader than long, with three interrupted ferruginous stripes: segments of the mesothorax and metathorax with pitchy spots on their disks: abdomen pitchy, almost as long as the wings, with testaceous stripes widening from the tip towards the base, which they mostly occupy: legs yellow: wings limpid, rather narrow, very short, not pointed; stigma white, with a small adjoining pale brown spot in each of the four wings; veins whitish, slightly ciliated; subcostal areolets simple, their veins not forked between the base and the stigma: hind-wings narrower and shorter than the fore-wings. Length of the body 9 lines; of the wings 16 lines.

a. North India. From Mr. Stevens' collection.

133. Myrmeleon exitialis.

Niger; caput flavo varium; thorax flavo submarginatus; prothorax antice angustior, multo latior quam longior, luteo sexmaculatus; abdominis segmentorum margines postici flavi; pedes flavo varii; alæ subcinereæ, longæ, angustæ, subacuminatæ, anticæ fusco guttatæ, stigmate flavo.

Black: head luteous about the mouth, with a yellow spot on each side between the eye and the mouth, with another at the base of each antenna, and with a yellow dot between the antenna and the eye; vertex with a luteous spot on each side and a yellow streak by each eye: antennæ clavate, much shorter than the thorax: prothorax much narrower in front, much broader than long, with four luteous spots forming a band in front and one on each side behind: margins of the segments of the mesothorax and of the metathorax partly yellow: abdomen much shorter than the wings; hind borders of the segments yellow: legs black; femora partly yellow; tarsi

yellow at the base; tibiæ with two yellow bands: wings slightly gray, long and narrow, slightly pointed; stigma pale yellow, with a brown spot on each side, indistinct in the hind-wings; veins black, with yellow bands; subcostal areolets simple, their veins not forked from the base of the wing till near the stigma; a row of dark brown spots along the radius, and another indistinct row along the cubitus; fork of the cubitus and the adjoining veins partly clouded with brown; gradate veinlets towards the tip clouded with brown; forks of the marginal veins indistinctly clouded at the base: hind-wings a little shorter and narrower than the fore-wings, not clouded. Length of the body 14 lines; of the wings 34 lines.

a. California. From Mr. Hartweg's collection.

134. Myrmeleon acutus.

Nigro-cinereus; caput flavo varium; palpi fulvi; pedes nigri, femoribus basi tibiisque posticis flavis; alæ subcinereæ, longæ, perangustæ, anticæ fusco guttatæ et bimaculatæ, stigmate flavo.

Black, slender, slightly tinged with gray: head yellow towards the mouth, with a yellow spot on each side of the face and with a yellow streak by the base of each antenna; palpi tawny: antennæ wanting: abdomen much shorter than the wings: legs black; femora beneath towards the base and hind tibiæ yellow: wings slightly gray, long, very narrow, slightly pointed; stigma pale yellow; veins black, with yellow bands; subcostal areolets simple, their veins forked at intervals from one-third of the length of the wing to the stigma where there is a dark brown spot; rows of dark brown spots along the radius and its sector, and along the cubitus and its fork; small brown spots on the forks of the marginal veins, and on the gradate veinlets towards the tip of the wing and along the hind border; a larger brown spot at the tip of the fork of the cubitus and another by the last of the quadrate areolets between the first sector of the radius and the cubitus: hind-wings a little shorter and narrower than the fore-wings, with a few brown dots towards the tips and along the hind border. Length of the body 14 lines; of the wings 34 lines.

a. New Zealand. Presented by Dr. Sinclair.

135. Myrmeleon tectus.

Nigro-cinereus, robustus, facie palpisque luteis; oculi flavo semicincti; antennæ thorace breviores, flavo annulatæ; prothorax linearis, multo latior quam longior; thoracis segmenta testaceo marginata; pedes nigri, femoribus tarsisque basi testaceis, tibiis testaceo cinctis; alæ hyalinæ, longæ, sat angustæ, subacuminatæ.

Black, tinged with gray, rather stout: head shining, black in front; face pale luteous except at the base; a yellow semicircle by each eye: palpi luteous: antennæ black, subclavate, shorter than the thorax; a yellow ring at the base of each joint excepting those towards the tip; first and second joints mostly luteous; a yellow circle round the base of the first: prothorax almost linear, with a middle transverse furrow, much broader than long: segments of the mesothorax and of the metathorax with testaceous borders: abdomen mutilated: legs black; femora and tarsi testaceous at the base; tibiæ with testaceous bands which are very broad on the hind pair: wings hyaline, long, rather narrow, slightly pointed; stigma white, with a small adjoining brown spot in the fore-wings; veins black with yellow bands, ciliated; veins of a few areolets wholly yellow; subcostal areolets simple, with a few forked veins near the stigma: hind-wings a little narrower and shorter than the fore-wings. Length of the body 15? lines; of the wings 34 lines.

a. North America. Presented by the Entomological Club.
b. St. John's Bluff, East Florida. Presented by E. Doubleday, Esq.

136. Myrmeleon asper.

Nigro-cinereus, gracilis; caput antice subtusque testaceum, vertice ruguloso ferrugineo vario, fronte nigro nitente; antennæ piceæ, testaceo annulatæ; prothoracis maculæ duæ anticæ vittæque quatuor testaceæ; thoracis et abdominis segmenta marginibus posticis testaceis; pedes testacei, subvalidi, femoribus tibiis et tarsorum articulis apice nigris, tibiis nigro cinctis; alæ limpidæ, angustæ, sublongæ, apice angulatæ.

Grayish black, slender: head black and shining in front; vertex transversely rugulose, with some ferruginous tubercles; face, underside, and palpi testaceous: antennæ pitchy, subclavate, as long as the thorax, testaceous at the base and on the fore borders of most of

the joints: prothorax almost linear, broader than long, testaceous on each side in front, and with four obscure testaceous stripes: mesothorax and metathorax with testaceous hind borders: abdomen much shorter than the wings, slightly increasing in breadth from the base to the tip; hind borders of the segments testaceous: legs testaceous, rather stout; tips of the femora, of the tibiæ and of the joints of the tarsi black; tibiæ with black bands: wings limpid, narrow, rather long, angular and pointed at the tips; stigma white; veins black, with white bands, slightly ciliated; discal areolets simple, with a few forked veins towards the stigma; marginal region narrow: hind-wings narrower and more lanceolate but hardly shorter than the fore-wings. Length of the body 15 lines; of the wings 36 lines.

a. ——— ? From Mr. Milne's collection.

137. Myrmeleon invisus.

Piceus, gracilis; caput nigrum, antice et subtus testaceum, vertice ferrugineo vario, fronte nitente; palpi ferruginei; antennæ nigræ, basi fulvæ; thorax flavo varius; prothorax multo longior quam latior; pedes testacei, tibiis anticis femoribusque subtus nigro strigatis, tarsis nigris basi testaceis; alæ limpidæ, subangustæ, lanceolatæ, apice non angulatæ.

Pitchy, slender: head black, shining in front; vertex partly ferruginous, with a slight longitudinal furrow; face and underside testaceous: palpi ferruginous: antennæ black, subclavate, tawny at the base, much shorter than the thorax: thorax yellow along each side and on the hind borders, and with three interrupted very slender stripes: prothorax linear, much longer than broad: legs testaceous, slender; femora and fore-tibiæ streaked with black beneath; tarsi black, testaceous at the base: wings limpid, rather narrow, lanceolate, not angular at the tips; stigma whitish; veins white, with a few black bands; subcostal areolets simple, with some forked veins from half the length to the stigma; marginal region narrow: hind-wings a little shorter, narrower and more lanceolate than the fore-wings. Length of the body 14 ? lines; of the wings 32 lines.

a. ——— ? From Mr. Milne's collection.

138. Myrmeleon malignus.

Piceus, gracilis; caput nigrum, facie testacea; palpi labiales testacei, longi, apice picei; prothorax testaceo marginatus; mesothorax et metathorax marginibus posticis testaceis; pedes picei, tibiis nisi ad apices femoribus basi coxisque testaceis; alæ limpidæ, angustæ, apice subangulatæ.

Pitchy, slender: head black, shining in front, with a yellow circle round each eye and round the base of each antenna; vertex with a slight longitudinal furrow; face testaceous: maxillary palpi pitchy; labial palpi long, testaceous; third joint pitchy: antennæ mutilated, testaceous at the base: prothorax linear, broader than long, with testaceous borders: mesothorax and metathorax with testaceous hind borders: legs pitchy, slender; tibiæ except at the tips, femora at the base and coxæ testaceous: wings limpid, narrow, slightly angular and pointed at the tips; stigma white; veins black, with white bands, ciliated; subcostal areolets simple, with an occasional forked vein by the stigma; marginal region very narrow: hind-wings shorter, narrower and more lanceolate than the fore-wings. Length of the wings 26 lines.

a. ——— ?

139. Myrmeleon fictus.

Piceus; caput nigrum, vertice facieque fulvis, illo nigro sexmaculato; palpi maxillares fulvi, labiales flavi, apice nigri; prothorax fulvus, nigro trivittatus; thoracis segmenta fulvo marginata; abdomen fulvo varium; pedes testacei, longi, graciles, nigro varii; alæ hyalinæ, angustæ, subacuminatæ.

Pitchy: head black, shining in front; vertex tawny, with two bands of incomplete black spots, three in each row; face and maxillary palpi tawny: labial palpi yellow; third joint black: prothorax tawny, a little broader than long, hardly narrower in front, with three blackish interrupted stripes: segments of the mesothorax and of the metathorax with tawny borders: abdomen with some tawny marks, mutilated; hind borders of the segments tawny: legs testaceous, rather long and slender; femora striped with black above; tibiæ black beneath; fifth joint of the tarsi with a black tip: wings hyaline, narrow, slightly pointed; stigma whitish, with a small adjoining pale brown spot in the fore-wings; veins white with black

bands, ciliated; subcostal areolets simple, their veins not forked between the base and the stigma: hind-wings a little shorter and narrower than the fore-wings. Length of the body 9? lines; of the wings 26 lines.

a. Congo. Presented by Sir John Richardson.

140. Myrmeleon immanis.

Cinereo-niger, gracilis; vertex flavo bimaculatus; palpi flavi; antennæ graciles, basi flavæ, thoracis longitudine; prothorax flavus, paullo longior quam latior, disco nigricante, subtus nigro bivittatus; thoracis segmenta flavo marginata; abdomen apice flavum; pedes testacei; alæ limpidæ, subangustæ, pubescentes, venis testaceis.

Black, slender, slightly tinged with gray: head not grayish, shining towards the mouth, with two yellow spots on the vertex: eyes bordered with yellow: palpi yellow: antennæ black, subclavate, slender, as long as the thorax, yellow at the base: prothorax yellow, rather longer than broad, a little narrower in front; disk blackish; underside yellow, with a blackish stripe on each side: segments of the mesothorax and of the metathorax with yellow borders: abdomen shorter than the wings; tip yellow: legs testaceous; hind-legs occasionally with some black marks: wings limpid, rather narrow, very pubescent and iridescent; stigma slightly testaceous, very indistinct; veins testaceous, of one colour; subcostal areolets simple, their veins forked from two-thirds of the length to the tip: hind-wings narrower than the fore-wings but hardly so long. Length of the body 12 lines; of the wings 24 lines.

a, *b*. China. Presented by G. T. Laye, Esq.

141. Myrmeleon sævus.

Testaceus; caput nigro varium, facie palpisque flavis; antennæ nigræ, thorace multo breviores, basi flavo biannulatæ; prothorax antice vix angustior, paullo longior quam latior, nigro trivittatus; thorax nigro quinquevittatus; abdomen nigro vittatum, lateribus nigro variis; alæ hyalinæ, sublatæ, sat brevès, non acuminatæ, anticæ apice fusco notatæ.

Pale testaceous: head shining in front, black about the base of the antennæ; vertex rather projecting, with a black stripe in the

middle and a few black spots on each side; face and palpi yellow: antennæ black, clavate, very much shorter than the thorax, with two yellow rings at the base: prothorax hardly narrower in front, a little longer than broad, with three black stripes, the middle one broader than the other two which are interrupted: mesothorax and metathorax with five black stripes, the middle one broad, the other four interrupted, the inner pair more slender than the outer pair: abdomen almost as long as the wings, with a black stripe above, and another below, and with some black streaks and dots on each side: legs testaceous, with a few black dots: wings hyaline, moderately broad, rather short, not pointed; stigma whitish, with a small adjoining brown spot in the fore-wings; veins black, with whitish bands, slightly ciliated: subcostal areolets simple, their veins not forked from the base to the stigma; forks of the marginal veinlets about the tips of the fore-wings indistinctly clouded with brown: hind-wings much shorter but hardly narrower than the fore-wings. Length of the body 12½ lines; of the wings 22 lines.

a. China. Presented by G. T. Laye, Esq.

142. MYRMELEON SAGAX.

Niger, gracilis; caput antice flavum nigro maculatum, vertice flavo bimaculato; palpi flavi; antennæ graciles, thorace paullo longiores; prothorax linearis, paullo longior quam latior, flavo trivittatus; thoracis segmenta flavo marginata; abdomen subtus flavum; alæ hyalinæ, longæ, angustæ, subacuminatæ.

Black, slender: head with two yellow spots on the vertex; front and face yellow, with some black spots: palpi yellow: antennæ black, slender, subclavate, a little longer than the thorax: prothorax linear, a little longer than broad, with three yellow stripes, the middle one very slender: segments of the mesothorax and of the metathorax with yellow borders: abdomen yellow beneath, much shorter than the thorax: legs testaceous: wings hyaline, slightly pointed, long and narrow; stigma whitish, very small in the hind-wings; veins black, slightly ciliated; subcostal and radial veins yellow with black bands; subcostal areolets with forked veins, and divided by transverse veinlets for some distance from the stigma towards the base: hind-wings a little narrower than the fore-wings. Length of the body 12 lines; of the wings 36 lines.

a. Silhet. From the Rev. J. Stainforth's collection.

143. Myrmeleon infensus.

Flavus, gracillimus; caput nigro varium; antennæ nigræ, thorace multo breviores; thorax nigro maculatus et univittatus; abdomen piceum, basi testaceum; alæ limpidæ, sublatæ, sat breves, non acuminatæ.

Yellow, very slender: head shining in front, black about the base of the antennæ, and with a black band above; vertex with a black dorsal stripe and with some black spots on each side: antennæ black, clavate, very much shorter than the thorax: prothorax nearly cylindrical, a little narrower in front, much longer than broad, with a black dorsal stripe, and with two black dots on each side; underside with two black stripes: mesothorax and metathorax with a black dorsal stripe, and with two rows of black spots on each side; underside with two interrupted black stripes on each side: abdomen pitchy, pubescent, much longer than the wings, testaceous above along half the length from the base: legs yellow; claws reddish: wings limpid, moderately broad, rather short, not pointed; stigma whitish, indistinct; veins white with black bands, ciliated; subcostal areolets simple, their veins not forked from the base to the stigma: hind-wings a little narrower and much shorter than the fore-wings. Length of the body 16 lines; of the wings 24 lines.

a. North India. From Mr. Stevens' collection.

144. Myrmeleon dolosus.

Nigro-piceus, gracillimus; facies antica flava; palpi ferruginei; antennæ graciles, subfiliformes, thorace longiores; thorax flavo bivittatus; pedes graciles, femoribus testaceis apice nigris, tibiis subtus testaceis; alæ limpidæ, vix acuminatæ, stigmate albo optime determinato.

Pitchy, black, very slender: head with a yellow mark at the base of each antenna; face yellow towards the mouth: palpi ferruginous: antennæ black, slender, almost filiform, longer than the thorax: thorax with a slight interrupted yellow stripe along each side by the base of the wings: prothorax a little narrower in front, convex and testaceous along the fore border, concave behind, rather broader than long: abdomen shorter than the wings: legs black, slender; coxæ partly testaceous; femora testaceous with black tips; tibiæ testaceous beneath: wings limpid, moderately long and broad, hardly pointed, very iridescent; stigma snowy white, very distinct;

veins black, ciliated; subcostal and radial veins tawny; a few of the subcostal areolets towards the stigma divided by transverse veinlets and having forked veins: hind-wings very little narrower and shorter than the fore-wings. Length of the body 13 lines; of the wings 30 lines.

a. Santarem, Brazil. From Mr. Stevens' collection.

145. Myrmeleon hostilis.

Piceus; caput nigrum, facie flava; palpi maxillares nigri, labiales albidi apice nigri; antennæ nigræ, thorace breviores; thoracis margines postici et prothorax omnino testacei; pedes flavi, nigro varii; alæ hyalinæ, angustæ, non acuminatæ.

Pitchy: head black, with a pale yellow circle round each eye, and a pale yellow ring round the base of each antenna; face pale yellow in front: labial palpi whitish; third joint black: maxillary palpi black: antennæ black, clavate, shorter than the thorax: prothorax dark testaceous, hardly narrower in front, a little longer than broad; fore border and hind border occasionally yellow: mesothorax and metathorax with testaceous hind borders: legs pale yellow; a broad black band round each femur; tibiæ black beneath; tarsi black, yellow at the base; fore-tibiæ ferruginous, with yellow streaks; wings hyaline, narrow, not pointed; stigma white, with a small adjoining pale brown spot in the fore-wings; veins white with black bands, ciliated; subcostal areolets simple, their veinlets with one, two or three forks near the stigma: hind-wings shorter but very little narrower than the fore-wings. Length of the body 10? lines; of the wings 27 lines.

a. West Australia. From Mr. Clifton's collection.
b. Australia. From the Voyage of H. M. S. Rattlesnake.

146. Myrmeleon callidus.

Testaceus, gracillimus; caput nigro maculatum; prothorax antice subangustior, paullo longior quam latior, piceo bivittatus; thorax piceo maculatus; abdomen piceum, testaceo guttatum; pedes nigro guttati, tibiis et tarsorum articulis apice nigris; alæ limpidæ, longæ, perangustæ, acuminatæ, anticæ apice fusco notatæ.

Testaceous, very slender: head blackish about the base of the antennæ; vertex with two bands of black spots, the fore one of four

spots, the hind one of eight spots: palpi yellow; a black spot on the last joint of the labial palpi: prothorax rather narrower in front, a little longer than broad, with two pitchy stripes which are forked in front: mesothorax and metathorax with pitchy spots: abdomen pitchy, long, as long as the wings, with a testaceous dot on each side of the second segment, and a testaceous mark on the fourth: legs testaceous, with a few black dots; tips of the tibiæ and of the joints of the tarsi black: wings limpid, long, pointed, very narrow; stigma whitish, with a very small adjoining brown spot in the fore-wings; veins white, ciliated, with black bands, wholly white in two large spaces of the disk of each wing; subcostal areolets simple, their veinlets not forked between the base and the stigma; a brown dot on the tip of each marginal veinlet along the hind border from the base to the end of the fork of the radius, about which the veins are clouded with brown; gradate veinlets black, clouded with brown about the intersection of the cubitus; forks of the marginal veinlets along the hind border towards the tip of the wing clouded with paler brown; hind-wings narrower but not shorter than the fore-wings; veins in the disk wholly white; no brown marks except a very minute one near the tip of the cubitus. Length of the body 14 lines; of the wings 28 lines.

a. Port Natal. From M. Gueinzius' collection.

147. Myrmeleon insomnis.

Nigro-piceus, gracilis; caput, antice subtusque testaceum, fronte nigro nitente, vertice fulvo e tuberculis nigris trifasciato; thorax testaceo varius; prothorax testaceus, paullo longior quam latior, nigro quadrivittatus; pedes testacei, tibiis et tarsorum articulis apice nigris, femoribus posticis apicem versus nigricantibus; alæ limpidæ, angustæ, apice subangulatæ, anticæ fusco notatæ.

Pitchy black, slender: head black and shining about the base of the antennæ; vertex tawny, with three bands of black tubercles; face, underside and palpi testaceous: prothorax linear, a little longer than broad, with four blackish stripes: segments of the mesothorax and of the metathorax with testaceous spots and borders: legs testaceous, slender; tips of the tibiæ and of the joints of the tarsi black; hind-femora blackish towards the tips: wings limpid, narrow, slightly angular and pointed at the tips; stigma white, with a small accompanying black spot in each fore-wing; veins white with the exception of the clouded parts and of a few black bands;

subcostal areolets short, simple, with one or two forked veins by the stigma; fore-wings with many of the transverse veinlets clouded with pale brown: hind-wings a little shorter and narrower than the fore-wings, not marked. Length of the body 10? lines; of the wings 27 lines.

a. ——— ? From Mr. Milne's collection.

148. Myrmeleon occultus.

Testaceus, gracillimus; caput piceo varium, antice nigro fasciatum, facie palpisque flavis; antennæ nigræ, graciles, thorace multo breviores; prothorax subcylindricus, antice angustior, piceo trivittatus, duplo longior quam latior; thoracis segmenta dorsalia picea, testaceo guttata et marginata; abdomen piceo bivittatum; pedes longi, graciles, tibiis anticis tarsisque albo nigris; alæ subhyalinæ, sublongæ, perangustæ, non acuminatæ, apice fusco notatæ.

Testaceous, very slender, like *Chrysopa:* head with a black band above the eyes; vertex with a short pitchy band; hind part mostly pitchy; face and palpi pale yellow: antennæ black, slender, subclavate, much shorter than the thorax: prothorax subcylindrical, narrower in front, with three pitchy stripes; its length about twice its breadth: mesothorax and metathorax pitchy above; their segments with testaceous dots and borders: abdomen with two pitchy stripes, very much shorter than the wings: legs testaceous, long and slender; tarsi black, whitish at the base; fore-tibiæ with black tips, and with a black band between two whitish bands near the base: wings subhyaline, rather long, very narrow, not pointed, ciliated along the hind borders; stigma whitish, with a small adjoining brown spot in the fore-wings; veins black, with whitish bands, ciliated; subcostal areolets simple, their veins not forked between the base and the stigma; gradate veinlets and forks of marginal veinlets from the end of the fork of the cubitus to the tip of the wing clouded with brown: hind-wings narrower and a little shorter than the fore-wings; clouds on their veinlets very few and indistinct. Length of the body 6 lines; of the wings 22 lines.

a. Adelaide. Presented by the Earl of Derby.

149. Myrmeleon metuendus.

Piceus, gracilis; caput antice nigrum, vertice fulvo piceo maculato, facie testacea nigro bimaculata; palpi pallidi, labiales apice picei; antennæ nigræ, thorace breviores; prothorax testaceo trivittatus; pedes testacei, piceo varii; alæ limpidæ, angustæ, subacuminatæ.

Pitchy, slender: head black in front and about the base of the antennæ; vertex tawny, with two bands of pitchy spots; face testaceous, with two black spots: palpi pale; third joint of labial palpi pitchy: antennæ black, clavate, shorter than the thorax, with two yellow rings at the base: thorax with testaceous borders: prothorax linear, a little broader than long, with three interrupted testaceous stripes, of which there are some traces on the rest of the thorax: legs testaceous, with pitchy streaks: fore-legs pitchy; femora testaceous towards the base; first and fifth joints of the tarsi testaceous with pitchy tips; second, third, and fourth joints testaceous at the base: wings limpid, narrow, slightly pointed; stigma whitish, indistinct; veins white; subcosta, radius and cubitus with black bands; subcostal areolets simple, with one or two forked veins by the stigma: hind-wings a little shorter and narrower than the fore-wings. Length of the body 9 lines; of the wings 22 lines.

a. Venezuela. From Mr. Dyson's collection.

150. Myrmeleon efferus.

Testaceus, gracilis; caput antice nigrum, vertice nigro maculato; palpi albidi, apice nigri; antennæ ferrugineæ, annulatæ, thorace multo breviores; prothorax multo latior quam longior, piceo quadrivittatus; mesothorax et metathorax piceo notati; abdomen piceo fasciatum; pedes postici albi, nigro cincti; alæ limpidæ, subacuminatæ, apice cinereæ.

Testaceous, slender: head paler beneath, black and shining about the base of the antennæ; vertex with a band of black spots: palpi whitish with black tips: antennæ ferruginous, subclavate, very much shorter than the thorax; tips of the joints testaceous: prothorax linear, much broader than long, with four irregular pitchy stripes: mesothorax and metathorax with indistinct pitchy marks: abdomen with pitchy bands, nearly as long as the wings: anterior legs testaceous, with black marks: hind-legs white, long and slender,

each femur, tibia and tarsus with a black band and a black tip: wings limpid, rather short, slightly pointed, with gray tips; stigma whitish, with an adjoining brown spot in the fore-wings; veins and areolets comparatively few; veins white, with black bands, wholly white along the borders, a few wholly black veinlets in the disk; subcostal areolets simple, their veins not forked between the base and the stigma: hind-wings shorter than the fore-wings and not more than half their breadth; veins wholly white excepting some black bands on the radius, a few black veinlets between the stigma and the tip; these also appear on the fore-wings. Length of the body 11 lines; of the wings 22 lines.

a. Pará. From Mr. Stevens' collection.

151. Myrmeleon exsanguis.

Niger, gracillimus; facie palpisque testaceis; thorax ferrugineus, testaceo marginatus; prothorax linearis, longior quam latior; pedes testacei, tibiis et tarsorum articulis apice piceis; alæ limpidæ, angustæ, apice subangulatæ.

Black, very slender: face and palpi testaceous: antennæ mutilated, testaceous at the base: thorax ferruginous, with testaceous borders: prothorax linear, longer than broad: abdomen shorter than the wings: legs testaceous, slender; tips of the tibiæ and of the joints of the tarsi pitchy: wings limpid, narrow, slightly angular at the tips: stigma whitish, very indistinct; veins white, ciliated; some pitchy dots on the subcosta, radius and cubitus of the fore-wings; subcostal areolets simple, with a few forked veins near the stigma; marginal region narrow: hind-wings narrower and shorter than the fore-wings. Length of the body 11 lines; of the wings 25 lines.

a. ——— ? From Mr. Milne's collection.

152. Myrmeleon crudelis.

Piceus, gracilis; caput antice et subtus testaceum, vertice ferrugineo, fronte nigro; palpi testacei; antennæ ferrugineæ, clavatæ, apice piceæ; prothorax testaceus, longior quam latior, piceo trivittatus; thoracis margines postici et pedes testacei; alæ limpidæ, angustæ, apice subangulatæ.

Pitchy, slender: head black in front; vertex ferruginous, very convex, with a slight longitudinal furrow; face and underside testaceous: palpi testaceous: antennæ ferruginous, clavate, much shorter than the thorax; tips pitchy: prothorax linear, pale testaceous, longer than broad, with three pitchy stripes, the side pair short: segments of the mesothorax and of the metathorax with testaceous hind borders: abdomen shorter than the wings: legs testaceous, slender: wings limpid, narrow, slightly angular at the tips; stigma whitish, very indistinct; veins white, ciliated; subcosta and cubitus with pitchy bands; subcostal areolets simple, with two or three forked veins by the stigma; marginal region narrow: hind-wings a little shorter and narrower than the fore-wings. Length of the body 12 lines; of the wings 26 lines.

a. St. John's Bluff; E. Florida. Presented by E. Doubleday, Esq.

153. Myrmeleon morosus.

Testaceus, gracilis; caput nigro fasciatum, vertice nigro vittato et maculato; palpi albidi; antennæ piceæ, annulatæ, thoracis dimidio vix longiores; thorax nigro trivittatus, prothorace paullo latiore quam longiore; abdomen nigrum, basi testaceo strigatum; pedes testacei piceo varii; alæ limpidæ, parvæ, non acuminatæ, anticæ apice fusco notatæ.

Testaceous, slender: head with a black band above the base of the antennæ; vertex with a black stripe, and with two bands of black spots: palpi whitish: antennæ pitchy, clavate, testaceous at the base, little more than half the length of the thorax; tips of the joints testaceous: thorax with three black stripes, which become interrupted and irregular as they extend hindward: prothorax a little narrower in front, rather broader than long, with a black stripe on each side beneath: segments of the mesopectus and of the metapectus pitchy, with testaceous borders: abdomen black, nearly as long as the wings, with a testaceous streak on each side at the base: legs testaceous, with pitchy dots; femora with pitchy streaks; tips of the tibiæ and of the joints of the tarsi pitchy: wings limpid, rather short and narrow, not pointed; stigma white with an adjoining brown spot; veins white with black bands; subcostal areolets simple, their veins not forked between the base and the stigma; two slight oblique brown streaks, one in the disk near the tip, the other proceeding in a curved line outward from the fork of the cubitus which is clouded at its base; forks of some of the marginal veinlets very slightly clouded: hind-wings narrower and much shorter than

the fore-wings, not marked; veins here and there wholly white. Length of the body 13 lines; of the wings 22 lines.

a. North India. From Mr. Stevens' collection.

154. Myrmeleon atrox.

Flavus; caput ferrugineo varium; antennæ ferrugineæ; thorax nigro trivittatus; prothorax linearis, latior quam longior; abdomen vitta dorsali dimidioque apicali nigris; alæ limpidæ, breviusculæ, sat latæ, non acuminatæ, stigmate flavo.

Yellow: vertex with a ferruginous dorsal stripe, and on each side with a spot and a dot of the same colour: antennæ ferruginous, clavate, longer than the thorax: prothorax linear, broader than long, with three black stripes; the pair shortened in front: mesothorax and metathorax with three black stripes, the pair more interrupted than the middle one: abdomen shorter than the wings, blackish from the tip to the middle, and with a black stripe from thence to the base: legs yellow: wings limpid, moderately broad, rather short, not pointed; stigma yellow, more indistinct in the hind-wings; veins yellow; longitudinal veins with black bands; subcostal areolets simple, their veins not forked between the base of the wing and the stigma; hind-wings shorter and a little narrower than the fore-wings. Length of the body 12 lines; of the wings 26 lines.

a. Turkey. Presented by — Loftus, Esq.

155. Myrmeleon iners.

Testaceus, ferrugineo sexguttatus; antennæ ferrugineæ; abdomen piceum, basi testaceum ferrugineo vittatum; alæ limpidæ, breviusculæ, sat latæ, non acuminatæ, stigmate flavo.

Pale testaceous: vertex with two ferruginous dots: antennæ ferruginous, clavate, much shorter than the thorax: prothorax linear, a little broader than long, with a ferruginous dot on the fore border and one on each side of the disk: mesothorax with a ferruginous dot on each side of the scutellum: abdomen pitchy, testaceous, and with a ferruginous dorsal stripe towards the base: legs testaceous: wings limpid, moderately broad, rather short, but not pointed; stigma pale yellow, indistinct; veins very pale testaceous; subcostal veins with brown bands; subcostal areolets simple, their veins not forked between the base of the wing and the stigma: hind-wings

shorter and a little narrower than the fore-wings. Length of the body 11—12 lines; of the wings 24—26 lines.

a, b. Turkey. Presented by — Loftus, Esq.

156. Myrmeleon prædator.

Piceus, gracillimus; caput testaceum, nigro maculatum; antennæ testaceo annulatæ, thorace breviores; prothorax testaceo quadrivittatus; thoracis et abdominis segmenta testaceo marginata; pedes albidi, graciles, nigro notati, postici longi; alæ limpidæ, sat breves, subacuminatæ.

Pitchy, very slender: head dark testaceous, black about the base of the antennæ and on the disk of the face, and with a band of four black spots on the vertex: antennæ pitchy, subclavate, shorter than the thorax, with a testaceous band on the fore border of each joint: prothorax broader than long, a little narrower in front, with four testaceous stripes: segments of the mesothorax and of the metathorax with slightly testaceous borders: abdomen a little shorter than the wings; hind-borders of the segments pale testaceous: legs whitish, slender, with a few blackish marks which are most prevalent on the fore-legs; hind-legs long: wings limpid, rather short, slightly pointed: fore-wings moderately broad; stigma whitish, very indistinct; veins white, with a few black bands, thickly ciliated towards the tips of the wings which appear grayish; veins and areolets comparatively few; sector with no forks, and not running parallel to the radius, but descending to the disk like the following forks which proceed immediately and successively from the radius; subcostal areolets simple, their veins not forked between the base and the stigma: hind-wings shorter and much narrower than the fore-wings; no stigma; veins all white with the exception of a few black bands on the subcosta and on the radius. Length of the body 8½ lines; of the wings 18 lines.

a. Santarem, Brazil. From Mr. Stevens' collection.

Group 2.

Alæ maculis magnis vel determinatis.

a.

Prothorax fuscus vel cinereus. Alæ posticæ maculis magnis nigris.

157. Myrmeleon gratus.

Niger, thorace albo variegato; alis anticis in apice roseis, fusco maculatis, posticis hic fuscis, maculis tribus roseis.

Formicaleo? grata, *Say, Journ. Acad. Nat. Sci. Philad.* viii. 45, 2,
Myrmeleon rosipennis, *Ramb. Hist. Nat. Ins. Neur.* 408, 38, pl. 12, f. 2.
Myrmecoleon roseipennis, *Burm. Handb. Ent.* ii. 995, 13.

This species is the type of a group which approaches very near *Chrysopa*. The body is long and slender, the antennæ are long, slender and almost filiform; the prothorax is long; the abdomen is nearly cylindrical, but contracted towards the base: the wings are broad; the marginal region is extremely developed towards the tip; the subcostal areolets are simple, and many of their veins towards the stigma are forked.

a, b. United States.

158. Myrmeleon pulchellus.

Niger, gracilis, testaceo varius; antennæ subfiliformes, ad clavam luteo cinctæ; alæ anticæ subcinereæ fusco conspersæ, posticæ hyalinæ fusco bifasciatæ.

Myrmeleon pulchellus, *Ramb. Hist. Nat. Ins. Neur.* 408, 39.

a. New Holland. From Mr. Strange's collection.
b. New Holland. From Mr. Walker's collection.
c. New Holland. From Mr. Lambert's collection.
d. New Holland. From Mr. Milne's collection.
e, f. New Holland.

159. Myrmeleon falsus.

Ater, gracillimus; caput fascia facieque testaceis; palpi testacei, piceo annulati; antennæ gracillimæ, testaceo annulatæ, thorace multo breviores; pedes longi, graciles, testaceo varii; alæ longissimæ, perangustæ, anticæ cinereæ apice fusco notatæ, posticæ subhyalinæ fascia lata fusca.

Deep black, very slender, clothed with short black hairs: head with a pale testaceous band above the base of the antennæ; face testaceous: palpi testaceous; joints pitchy towards the base: antennæ very slender, subclavate, much shorter than the thorax; joints towards the base with testaceous fore borders: prothorax much narrower in front; its length nearly twice its breadth: mesothorax and metathorax with pitchy hind borders: abdomen very much shorter than the wings: legs long and slender; femora and tarsi testaceous at the base; tibiæ partly testaceous: wings very long and narrow; veins black, ciliated: fore-wings gray; stigma black; subcosta, radius and cubitus with some white bands; subcostal areolets simple, with a few forked veins towards the stigma; a dark brown spot close to the stigma, and some black dots along the hind border; gradate veinlets towards the tips and forks of marginal veinlets at the tips and along part of the hind border clouded with brown: hind-wings subhyaline, much shorter and a little narrower than the fore-wings; marginal region very broad at the tips; a broad dark brown band near the stigma, narrower towards the fore border. Length of the body 10 lines; of the wings 28—30 lines.

a. New South Wales. Presented by J. W. Evans, Esq.
b. Port Stephen, New Holland. Presented by the Earl of Derby.

The following *Myrmeleon* is closely allied to the two preceding species, but its unspotted wings do not agree with Rambur's definition of the group to which they belong.

160. Myrmeleon malus.

Nigro-piceus, gracillimus; caput testaceo varium; palpi pallidi, apice picei; antennæ graciles, albo annulati, thorace longiores; thorax testaceo varius; abdomen subcylindricum, apice testaceum; pedes testacei, longi, graciles, piceo varii; alæ hyalinæ, longæ, angustæ, vix acuminatæ.

Pitchy black, very slender, like a *Chrysopa:* head yellow on each side of the front by the eye; face testaceous; vertex partly ferruginous; hind part with two testaceous stripes, and a testaceous spot by each eye: palpi pale, with pitchy tips: antennæ pitchy black, slender, clavate, longer than the thorax, linear from the base to the club; joints with white bands which diminish in breadth from the base to the club: prothorax narrower in front, a little longer than broad, with some indistinct testaceous marks on each side: segments of the mesothorax and of the metathorax with partly testaceous borders: abdomen slender, subcylindrical, shorter than the wings; tip testaceous: legs testaceous, long, slender, with some slight pitchy marks; femora at the base and trochanters paler; tarsi and tips of the tibiæ pitchy, the former testaceous at the base: wings hyaline, long, narrow, hardly pointed; stigma brownish, indistinct, hardly visible in the hind-wings; veins black, with white bands, slightly ciliated; subcostal areolets simple, their veins not forked between the base and the stigma: hind-wings a little narrower and longer than the fore-wings, with a brown streak near and parallel to the hind border, at two-thirds of the length from the base. Length of the body 7½ lines; of the wings 22 lines.

a. New Holland. Presented by Captain Grey.

a a.

Prothorax rufus. Alæ guttis magnis.

161. Myrmeleon erythrocephalus.

Niger; caput rufum; antennæ nigræ; prothorax transversus, rufus; thorax interrupte rufo vittatus; femora posteriora basi et antica omnino rufa; alæ albæ, anticæ e maculis nigris bivittatæ, posticæ maculis 1—4 *apicalibus.*

Myrmeleon erythrocephalus, *Leach, Zool. Miscell.* 1, 70, pl. 30. *Ramb. Hist. Nat. Ins. Neur.* 409, 40.

a. Australia. From Mr. Strange's collection.
b. Australia.

162. Myrmeleon guttatus.

M. erythrocephalo *affinis; alæ paullo latiores, maculis majoribus aliter collocatis.*

Myrmeleon guttatus, *Ramb. Hist. Nat. Ins. Neur.* 409, 41.
M. erythrocephalus, Var. ?

Subsect. 2.

Palpi labiales maxillaribus triplo vel quadruplo longiores.

163. Myrmeleon elegans.

Rufo-flavus; antennæ nigræ, basi ferrugineæ; palpi flavi, labiales maxillaribus quadruplo longiores; abdomen rufo-fuscum, flavo bivittatum; pedes testacei; alæ hyalinæ, fusco octomaculatæ.

Myrmeleon elegans, *Perty, Del. Anim. Artic.* 125, pl. 25. *Ramb. Hist. Nat. Ins. Neur.* 409, 43.

Brazil.

164. Myrmeleon subdolus.

Piceus, gracilis; caput testaceum, piceo fasciatum, vertice nigro guttato, facie flava; palpi ferruginei, labiales longi apice clavati picei; antennæ basi ferrugineæ; thorax testaceo maculatus; abdomen testaceo bivittatum; pedes testacei; alæ limpidæ, amplæ, apice vix angulatæ; anticæ guttis basalibus et posticis, fasciis duabus apicibusque fuscis, posticæ fasciis tribus connexis fuscis.

Pitchy, slender: head testaceous, pitchy about the base of each antenna, and with a pitchy band in front; vertex with two bands of partly confluent black dots; face pale yellow: palpi ferruginous; labial palpi very long and slender, with pitchy clavate tips: antennæ pitchy, subclavate, ferruginous towards the base, very much shorter than the thorax: prothorax narrower in front, broader than

long, with two oblong oblique testaceous spots on each side: mesothorax and metathorax with testaceous spots on the borders of their segments: abdomen long, shorter than the wings, with a testaceous stripe along each side: legs testaceous, slender; spurs and claws ferruginous, the former slightly curved and a little longer than the first joint of the tarsus: wings limpid, ample, hardly angular at the tips; stigma white; veins mostly white; subcostal areolets simple, with a few forked veins towards the stigma; marginal region rather broad at the tip of the wing: fore-wings brown on one-third of the length from the tips, with brown dots at the base and along most of the hind border, and in the middle with two oblique brown bands which do not extend beyond half the breadth from the fore border; the brown parts contain many limpid or grayish dots, and some of the gradate veinlets near the tip are bordered with white: hind-wings very little shorter and hardly narrower than the fore-wings, with a brown spot in the disk and some brown dots on the hind border before the middle, and with three connected brown bands beyond the middle, the third apical, and including with the second some limpid spots. Length of the body 17 lines; of the wings 38 lines.

a. Lima. From Mr. Walker's collection.

Sect. 2.

Antennarum clava fere rotunda. Tarsorum articulus 2us vel 3us lo multo brevior.

165. Myrmeleon clavicornis.

Pallidus, vertice thoraceque nigro punctatis; antennæ capitatæ, thorace multo breviores; alæ anticæ guttis strigisque nigris confertim notatæ, posticæ nigro maculatæ et fascialæ.

Myrmeleon clavicornis, *Latr. Cuv. Règne Anim.* iii. 438, 5, pl. 19, f. 6. *Ramb. Hist. Nat. Ins. Neur.* 410, 43.

Senegal.

166. Myrmeleon compositus.

Flavus, subrobustus; caput flavo trifasciatum; antennæ nigræ, capitatæ, basi flavæ, capitis latitudine non longiores; prothorax fusco fasciatus; mesothorax et metathorax margine antico lateribusque nigris; abdomen nigro varium; pedes validi, tibiis tarsisque nigris, illis basi flavis; alæ albæ, apice fusco marginatæ et maculatæ.

In the structure of the body and colouring of the wings this species is allied to the first group of the genus, while it resembles *M. clavicornis* in the form of its antennæ. Yellow, rather stout: head with a black band beneath, and a broader one above, the base of the antennæ, and a third on the hind part: palpi pale yellow, slender: antennæ capitate, black, yellow at the base, not longer than the breadth of the head; club very broad: prothorax pale yellow, narrower in front, twice broader than long, with a short brown band which is excavated on each side of the hind border: mesothorax and metathorax black in front and on each side, and with a black spot on each disk; a yellow dot on each side of the metathorax: abdomen slender, shorter than the wings, clothed with whitish hairs towards the base in the female, and with short black hairs in the male, mostly black beneath and partly so on each side: appendages of the male short, tawny, curved upward, armed on the inner side with short black spines, curved outward towards the base: legs stout, yellow; tibiæ except at the base and tarsi black; spurs slightly curved, longer than the first joint of the tarsi; ungues ferruginous: wings white, moderately broad, not pointed; tips bordered with brown; stigma bright yellow; veins pale yellow; marginal region broad at the tips; subcostal areolets simple, their veins not forked between the base and the stigma: fore-wings with numerous transverse brown dots which are variable in number, and are most frequent on three separate spaces along the wing; fork of the cubitus descending obliquely to the hind border: hind-wings a little narrower and shorter than the fore-wings, with a brown spot of variable size in the disk, and with a few brown marks near the stigma and by the opposite hind border; a little winglet at the base; subcubitus descending obliquely towards the hind border, forming an acute angle, and again returning towards the cubitus. Length of the body 16—17 lines; of the wings 38—40 lines.

a. East Indies. Presented by J. C. Dale, Esq.
b. North India. From Mr. Stevens' collection.
c. North Bengal. From Miss Campbell's collection.
d. ——— ?

167. Myrmeleon astutus.

Piceus, gracilis; facies flavo fasciata; antennæ nigræ, thorace multo breviores; thoracis segmenta postice testacea; abdomen testaceum, basi piceum; pedes nigri, validi; alæ amplæ, flavido-albæ, non acuminatæ, fasciis duabus marginibusque fuscis albo maculatis.

This species is most allied to *M. compositus*, but will form a distinct group. Pitchy, rather slender, mostly clothed with whitish hairs: head shining in front; face with a yellow band: labial palpi much longer than the maxillary palpi: antennæ black, clavate, much shorter than the thorax: prothorax much narrower in front, much broader than long: segments of the mesothorax and of the metathorax with testaceous hind borders: abdomen dark testaceous, pitchy at the base and occasionally beneath towards the tip; legs black, rather stout; spurs as long as the first and second joints of the tarsi: wings long and broad, not pointed, yellowish white, bordered with brown except along the hind border towards the base; stigma obsolete; veins ciliated; marginal region broad at the tips and along the hind border; subcostal areolets simple; their veins forked at intervals between the base and the stigma: fore-wings with spots along the fore border and at the tips and along part of the hind border where the brown colour advances into the disk and forms three broad, irregular, oblique bands; the second and third more or less connected towards the hind border: hind-wings as broad and almost as long as the fore-wings, limpid towards the base, with two broad undulating brown bands which are connected in the middle; spots very few; subcubitus ascending and descending as in *M. compositus*, but less deeply, and forming a right angle. Length of the body 18 lines; of the wings 44 lines.

a, *b*. North India. From Mr. Stevens' collection.

168. Myrmeleon translatus.

Niger; antennæ thorace multo breviores; prothorax fulvo marginatus; alæ latissimæ, anticæ luteæ fusco guttatæ, posticæ pallidiores fusco fasciatæ et maculatæ.

This differs from all the other species of *Myrmeleon* by its short body, and especially by the great breadth of its wings. Black, shining, clothed with black hairs: face yellow, and with a yellow

spot on each side; palpi short: antennæ clavate, about half the length of the thorax: prothorax tawny in front and behind, narrower in front; its length about half its breadth: abdomen of the female about twice the length of the thorax; that of the male a little longer and with two short, subclavate, slightly curved appendages at the tip: legs short, stout; spurs not longer than the first joint of the tarsi; wings of the female broader than those of the male; fore-wings luteous, thickly covered with brown dots; veins very slightly ciliated: hind-wings of the male yellow, of the female whitish, with numerous brown spots towards the base and towards the tip, and in the middle with two irregular and incomplete brown bands which are united towards the hind border in the female. Length of the body 12—14 lines; of the wings 28—36 lines.

a. Cape. Presented by R. W. Townsend, Esq.
b. ———? From Mr. Milne's collection.
c. ———?

Sect. 3.

Antennarum clava elongata. Tarsorum articulus 1us 2o vel 3o brevior.

169. Myrmeleon bisignatus.

Rufo-fuscus, flavo maculatus; facies flava; antennæ rufo-fuscæ, subtus clava basique flavæ; abdomen flavum, segmentis antice nigro cinctis; pedes testacei; alæ hyalinæ, breves, sat latæ, anticæ fusco notatæ et unimaculatæ.

Megistopus bisignatus, *Ramb. Hist. Nat. Ins. Neur.* 411, 1.

South France?

Div. 11. Alæ excisæ.

170. Myrmeleon singularis.

Albidus, fusco variegatus; capite parvo, fusco irrorato; antennis sensim incrassatis; prothorace elongato, postice fusco maculato, thoracis dorso fusco maculato, maculis duabus obscurioribus inter basin alarum posticarum; abdominis segmentis albido oblique vittatis; pedibus albidis, calcaribus elongatis curvatis; alis elongatis, anticis apice dilatatis subfalcatis; posticis apice acutis; omnibus fusco maculatis; alis in fœmina nitidissimis. Long. alar. 48 lin.

Myrmeleon singulare, *Westw. Orient. Ent.* 70, pl. 34, f. 4.

a. North India. From Mr. Stevens' collection.

171. Myrmeleon circuiter.

Ater, nitens, subglaber, gracillimus, antice ferrugineus; antennæ flavæ, filiformes; prothorax multo longior quam latior; abdomen fasciis duabus apiceque testaceis; pedes testacei, longissimi, gracillimi, intermedii nigro varii; alæ limpidissimæ, angustæ, iridescentes, apice opalinæ, fusco maculatæ et bifasciatæ, margine postico apicem versus excavato.

Deep black, shining, very slender, almost bare: head and prothorax ferruginous: palpi short; maxillary palpi testaceous; labial palpi pitchy: antennæ yellow, filiform, a little darker at the tips, much shorter than the thorax: prothorax linear, with two transverse furrows, much longer than broad: second and third segments of the abdomen testaceous at the base; tip testaceous: legs testaceous, very long and slender; spurs slender, curved towards the tips, nearly as long as the two first joints of the tarsi; fore-legs shorter and darker than the hind-legs; middle femora black with testaceous tips; middle tibiæ with three black bands: wings narrow, quite limpid, very iridescent, with opaline lustre towards their tips, excavated along their hind borders near the tips which are rounded; stigma white, small; veins ciliated, white, excepting the brown parts and a few black bands; subcostal areolets simple, a few of them narrower towards the base, very few of them forked before the stigma; marginal region very broad about the tips of the wings: fore-wings with some brown spots and dots, and with two dark brown interrupted bands, one before the middle, the other near the tip, which has a brown border varied with limpid marks: hind-wings narrower and a little shorter than the fore-wings; excavation on the hind border less deep; none of the subcostal areolets narrower towards the base; two brown bands, one beyond the middle and occasionally interrupted, the other apical and including some limpid marks; radius with some brown dots which vary much in size and number. This species is allied to *Chrysopa*, and forms with *M. singularis* a distinct group of the genus. Length of the body 12—13 lines; of the wings 36—40 lines.

a, b. Australia. From Mr. Strange's collection.

Div. ——— ?

172. MYRMELEON OCELLATUS.

Capite thoraceque testaceis, hoc vitta laterali nigra ; abdomine pedibusque nigris, illo testaceo cingulato ; antennis roseis, clava nigra ; alis hyalinis, fusco maculatis.

Myrmeleon ocellatus, *Scriba, Beytr.* 161, pl. 11, f. 5.
Myrmecoleon ocellatus, *Burm. Handb. Ent.* ii. 995, 12.
New York.

173. MYRMELEON PUMILIO.

Niger, pallide variegatus ; antennis pallidis, nigro annulatis, clava abrupta nigra ; pedibus albo-setosis ; alis latioribus, stigmatibus albis.

Myrmecoleon pumilio, *Burm. Handb. Ent.* ii. 995, 19.
South Carolina.

174. MYRMELEON IMMACULATUS.

Testaceo-fuscus, segmentorum marginibus pallidis ; alis angustis elongatis, in apice summo acutis, posticis acuminatis.

——————— ? *Deg. Ins.* iii. pl. 27, f. 8.
Myrmecoleon immaculatus, *Burm. Handb. Ent.* ii. 994, 5.
North America.

175. MYRMELEON FRONTALIS.

Luteus ; fronte abdomineque nigris ; femoribus fasciatis ; alarum venis testaceis, subpunctatis ; alis posticis in quiete longioribus, omnibus in apice brevibus sed acutis.

Myrmecoleon frontalis, *Burm. Handb. Ent.* ii. 993, 3.
Java.

176. Myrmeleon luteipennis.

Luteo-flavus; dorso infuscato; abdomine nigro; alis flavo venosis, anterioribus in quiete brevioribus, omnibus in apice elongatis obtusiusculis.

Myrmecoleon luteipennis, *Burm. Handb. Ent.* ii. 993, 2.

Cape.

177. Myrmeleon Gulo.

Thorace hirsutissimo cinereo vittato; abdomine fusco, segmentis in basi testaceis; alis hyalinis, venis radialibus anticis et mediis alternatim fuscis et albis.

Myrmeleon Gulo, *Dalm. Anal. Entom.* 89, 101.

Myrmecoleon Gulo, *Burm. Handb. Ent.* ii. 997, 18.

Senegambia.

178. Myrmeleon gracilis.

Cinereus; alis lanceolatis hyalinis, obsolete reticulatis, sparsim fusco maculatis.

Myrmeleon gracilis, *Klug, Symb. Phys. dec.* 4, pl. 35, f. 5, No. 4.

Syria.

179. Myrmeleon irroratus.

Cinereus; capite thoraceque fusco punctatis; alis lanceolatis, subfalcatis, hyalinis, obsolete reticulatis.

Myrmeleon irroratus, *Klug, Symb. Phys. dec.* 4, pl. 35, f. 6, No. 5.

Arabia Felix, Saccahra.

180. Myrmeleon tenellus.

Cinereus, obsolete pallido maculatus; alis lanceolato-hyalinis, fusco alboque reticulatis, denticulato-lineolatis.

Myrmeleon tenellus, *Klug, Symb. Phys. dec.* 4, pl. 35, f. 7, No. 6.

Egypt, Arabia Deserta.

181. Myrmeleon virgatus.

Flavescens; capite maculis, thorace abdominisque vittis fuscis; alis fuscescente reticulatis, stigmate obscuriore.

Myrmeleon virgatus, *Klug, Symb. Phys. dec.* 4, pl. 36, f. 2, No. 8.
Arabia Deserta.

182. Myrmeleon cinereus.

Flavescens; maculis abdomineque fuscis; alis flavescente reticulatis.

Myrmeleon cinereus, *Klug, Symb. Phys. dec.* 4, pl. 36, f. 3, No. 9.
Syria, Arabia Deserta.

183. Myrmeleon lætus.

Flavus; lineis longitudinalibus antennisque fuscis; alis stigmate flavo.

Myrmeleon lætus, *Klug, Symb. Phys. dec.* 4, pl. 36, f. 4, No. 10.
Arabia Deserta.

184. Myrmeleon murinus.

Testaceus; capite thoraceque maculis fasciisque longitudinalibus obscurioribus; abdomine fusco-cinereo; alis albo reticulatis.

Myrmeleon murinus, *Klug, Symb. Phys. dec.* 4, pl. 36, f. 5, No. 11.
Syria.

185. Myrmeleon pallens.

Flavescens; capite thoraceque lineis ferrugineis obsoletis; abdomine linea media maculisque fuscis; alis pallido reticulatis.

Myrmeleon pallens, *Klug, Symb. Phys. dec.* 4, pl. 36, f. 6, No. 12.
Egypt.

186. Myrmeleon griseus.

Cinereus; capite thoraceque ferrugineo parum variegatis; abdomine obsolete fusco maculato; alis albido reticulatis.

Myrmeleon griseus, *Klug, Symb. Phys. dec.* 4, pl. 36, f. 8, No. 14.

Egypt.

187. Myrmeleon sticticus.

Fuscus, pilosus; capite thoraceque testaceis, fusco punctatis et lineatis; alis diaphaneis, venis fusco alboque annulatis.

Myrmeleon sticticum, *Blanch. Orbigny, Voy. Amer. Mérid.* 218, 753, pl. 28, f. 7.

Chiquitos, Bolivia.

188. Myrmeleon maculatus.

Niger; prothorace luteo; alis cinereis, anticis fusco punctatis et maculatis, posticis maculis fasciisque duabus incurvis fuscis.

Myrmeleon maculatum, *Deg. Ins.* iii. 565, 2, pl. 27, f. 9. *Roem. Gen. Ins.* 56, pl. 25, f. 3. *Oliv. Enc. Méth.* viii. 121, 3.

Myrmeleon speciosus?

189. Myrmeleon sinuatus.

Abdomine rufo, apice nigro; alis angustis, sinuatis; posticis fuscis, albo maculatis.

Myrmeleon sinuatum, *Oliv. Enc. Méth.* viii. 121, 4.

Cape.

190. Myrmeleon luteus.

Niger; femoribus basi flavo maculatis; alis anticis flavis, nigro punctatis; posticis albis, nigro maculatis.

Myrmeleon luteum, *Thunb. Spec. Ins. pars* 4, 78, f. 90. *Gmel. ed. Syst. Nat.* i. 5, 2643, 6. *Oliv. Enc. Méth.* viii. 122, 6.

Cape.

191. Myrmeleon bifasciatus.

Niger, flavo varius; antennis nigris; alis cinereis, anticis fusco-nebulosis; posticis fasciis duabus fuscis, prima flexuosa.

Myrmeleon bifasciatum, *Oliv. Enc. Méth.* viii. 122, 7.

Cape.

192. Myrmeleon pardalis.

Nigro flavoque varius; femoribus flavis; alis albis, punctis nigris, sparsis.

Myrmeleon pardalis, *Fabr. Sp. Ins.* i. 398, 2; *Mant. Ins.* i. 249, 2; *Ent. Syst.* ii. 92, 2. *Gmel. ed. Syst. Nat.* i. 5, 2643, 7. *Oliv. Enc. Méth.* viii. 122, 8.

Coromandel.

193. Myrmeleon pantherinus.

Flavus; abdomine nigro variegato; alis albis nigro maculatis.

Myrmeleon pantherinus, *Fabr. Mant. Ins.* i. 249, 3; *Ent. Syst.* ii. 93, 3. *Gmel. ed. Syst. Nat.* i. 5, 2643, 8. *Oliv. Enc. Méth.* viii. 122, 9.

Austria.

194. Myrmeleon lynceus.

Fuscus, subtus flavescens; antennæ filiformes, breves, nigræ, apice ferrugineæ; alæ hyalinæ, macula marginali apicis nigra, medio niveo.

Myrmeleon lynceus, *Fabr. Mant. Ins.* i. 249, 4; *Ent. Syst.* ii. 93, 4. *Gmel. ed. Syst. Nat.* i. 5, 2643, 9.

Myrmeleon lynx, *Oliv. Enc. Méth.* viii. 122, 11.

Sierra Leone.

195. Myrmeleon rapax.

Niger, flavo varius; abdomine fusco, bifariam flavo maculato; alis hyalinis fusco submaculatis.

Myrmeleon Catta, *Rossi, Faun. Etrusc.* ii. 15, 692.

Myrmeleon tetragrammicum, *Latr. Gen. Crust. et Ins.* iii. 192, 2.
Myrmeleon rapax, *Oliv. Enc. Méth.* viii. 123, 12.
Myrmeleon formicarius, Var.?

South Europe.

196. Myrmeleon ornatus.

Nigro flavoque varius; antennæ nigræ; pedes flavi, genubus nigricantibus; alæ hyalinæ flavo reticulatæ.

Myrmeleon ornatum, *Oliv. Enc. Méth.* viii. 123, 14.

South Russia.

197. Myrmeleon pictus.

Flavus, nigro maculatus; abdomen nigrum, linea laterali flava; alæ hyalinæ, immaculatæ.

Myrmeleon pictum, *Fabr. Ent. Syst. Supp.* v. 206. *Oliv. Enc. Méth.* viii. 124, 17.

South Russia.

198. Myrmeleon ermineus.

Cinereus; abdomen nigrum; alæ hyalinæ, immaculatæ, vena marginali flavescente cinerea.

Myrmeleon ermineum, *Fabr. Ent. Syst. Supp.* v. 206. *Oliv. Enc. Méth.* viii. 124, 18.

East Indies.

199. Myrmeleon Catta.

Alæ hyalinæ, fusco submaculatæ, venis nigro maculatis.

Myrmeleon Catta, *Fabr. Sp. Ins.* i. 399, 4; *Mant. Ins.* i. 249, 6; *Ent. Syst.* ii. 93, 6. *Gmel. ed. Syst. Nat.* i. 5, 2644, 11. *Oliv. Enc. Méth.* viii. 124, 20.

Madeira.

200. Myrmeleon lupinus.

Niger, testaceo variegatus; antennæ fuscæ, apice pallidiores; alæ subpunctatæ, venis albo nigroque variis.

Myrmeleon lupinum, *Oliv. Enc. Méth.* viii. 125, 21.

Egypt.

201. Myrmeleon punctatus.

Flavescens, statura et magnitudine Cattæ; *antennis incurvis; abdomine fusco; alis hyalinis, venis punctatis albis nigrisve alternis.*

Myrmeleon punctatum, *Fabr. Mant. Ins.* i. 249, 7; *Ent. Syst.* ii. 94, 7. *Gmel. ed. Syst. Nat.* i. 5, 2644, 12. *Oliv. Enc. Méth.* i. 5, 125, 23.

East Indies.

202. Myrmeleon tigrinus.

Fuscus, thoracis margine pedibusque flavis; alæ hyalinæ, immaculatæ.

Myrmeleon tigrinum, *Fabr. Syst. Ent.* 312, 5; *Sp. Ins.* i. 399, 6; *Mant. Ins.* i. 250, 9; *Ent. Syst.* ii. 94, 7. *Gmel. ed. Syst. Nat.* i. 5, 2644, 13. *Oliv. Enc. Méth.* viii. 125, 24.

New Holland.

203. Myrmeleon elongatus.

Flavus, fusco varius; antennæ nigricantes, basi flavæ; abdomen nigrum, vitta laterali flava; alæ hyalinæ, venis albis nigro punctatis.

Myrmeleon elongatum, *Oliv. Enc. Méth.* viii. 125, 25.

South France; Italy; Greece.

204. Myrmeleon vittatus.

Flavus, nigro varius: antennæ obscure flavæ, basi pallidiores; pedes flavi; alæ hyalinæ, stigmate albo.

Myrmeleon vittatum, *Oliv. Enc. Méth.* viii. 126, 26.

Arabia.

205. Myrmeleon hyalinus.

Flavus, nigro varius; antennæ obscure flavæ; abdomen nigrum, linea laterali flava; pedes flavi, tarsis nigro annulatis; alæ hyalinæ, venis pallidis immaculatis.

Myrmeleon hyalinum, *Oliv. Enc. Méth.* viii. 126, 27.

Arabia.

206. Myrmeleon variegatus (Nomen bis lectum).

Alæ fusco, cinereo, alboque variegatæ, violaceo-nitentes.

Myrmeleon variegatum, *Pal.-Beauv. Ins. Afric.* 20, *Neur.* pl. 1, f. 5. *Oliv. Enc. Méth.* viii. 126, 29.

Benin, Africa.

207. Myrmeleon irroratus.

Niger, flavo varius; antennæ nigræ, flavo annulatæ; pedes flavi, tibiis apice nigricantibus; abdomen nigrum, segmentis flavo bimaculatis; alæ hyalinæ, venis nigris albo variis.

Myrmeleon irroratum, *Oliv. Enc. Méth.* viii. 126, 30.

Italy; Greece.

208. Myrmeleon flavicornis.

Flavus, nigro varius; antennæ nigræ, flavo annulatæ, clava flava; abdomen nigricans, segmentis flavo maculatis; pedes flavi, tarsis nigricantibus, alæ hyalinæ.

Myrmeleon flavicornis, *Rossi, Faun. Etr.* ii. 16, 693, pl. 9, f. 2.
Myrmeleon flavicorne, *Oliv. Enc. Méth.* viii. 127, 31.

South France, Italy.

209. Myrmeleon irinus.

Alæ immaculatæ, viridi, cupreo violaceoque nitentes.

Myrmeleon irinum, *Pal.-Beauv. Ins. Afric.* 20; *Neurop.* pl. 1, f. 4. *Oliv. Enc. Méth.* viii. 127, 32.

Owara, Africa.

210. Myrmeleon melanocephalus.

Testaceus; caput nigrum; antennæ nigræ, basi testaceæ; alæ hyalinæ, immaculatæ, venis albis guttatis.

Myrmeleon melanocephalum, *Oliv. Enc. Méth.* viii. 127, 33.

211. Myrmeleon lituratus.

Flavus, nigro varius; abdomen obscurum; pedes flavi, femoribus anterioribus tarsisque obscurioribus; alæ hyalinæ, venis albo nigroque variis, anticæ lituris duabus fuscis.

Myrmeleon litturatum, *Oliv. Enc. Méth.* viii. 127, 34.

South France; Greece.

212. Myrmeleon nebulosus.

Niger, flavo notatus; abdomen nigrum, segmentis basi pallidis; pedes flavi; alæ hyalinæ, fusco reticulatæ, punctis maculisque obscuris.

Myrmeleon nebulosum, *Oliv. Enc. Méth.* viii. 127, 35.

New York.

213. Myrmeleon mustelinus.

Obscure cinereus, nigro lineatus; abdomen nigricans; alæ hyalinæ, venis albo nigroque punctatis, apice fusco punctatis.

Myrmeleon mustelinum, *Fabr. Ent. Syst. Suppl.* v. 207. *Oliv. Enc. Méth.* viii. 127, 36.

East Indies.

214. Myrmeleon ursinus.

Fuscus; caput flavum, nigro maculatum; pedes cinerei; alæ hyalinæ, immaculatæ.

Myrmeleon ursinum, *Fabr. Ent. Syst. Supp.* v. 207. *Oliv. Enc. Méth.* viii. 127, 37.

215. Myrmeleon caninus.

Fuscus, flavo maculatus; antennæ nigræ; alæ hyalinæ, immaculatæ.

Myrmeleon caninum, *Fabr. Ent. Syst.* ii. 94, 10. *Oliv. Enc. Méth.* viii. 128, 38.

Guinea.

216. Myrmeleon tarsalis.

Nigro-fuscescens, flavido maculatus; facie pallida, vertice atro signato; antennis flavescentibus atro fasciatis; pedibus longis hirsutis flavescentibus atro variis, tarsis hirsutis, ungula subtus spinulosa, unguiculis elongatis; alis hyalinis immaculatis subfalcatis, venis interrupte nigris, stigmate nigro.

Formicaleo tarsalis, *Lansdown Guilding, Trans. Linn. Soc. Lond.* xvi. 51, 2.

Demerara?

217. Myrmeleon? ornatus.

Viridis, nigro varius; alæ limpidæ, anticæ fasciis duabus obliquis nigris.

Hemerobius ornatus, *Drury, Ins.* i. pl. 46, f. 2.
Euptilon ornatum, *Westw. edit. Drury.*
Chauliodes? ornatus, *Ramb. Hist. Nat. Ins. Neur.* 445, 3.

Virginia.

Genus 2. ASCALAPHUS.

Corpus breve, latum. Antennæ longæ, capitatæ.

Ascalaphus, *Fabr.*; *Latr.*; *Oliv.*; *Pallas*; *Klug*; *Burm.*; *Duméril*; *Borkh.*; *Charp.*; *Kunze*; *Ramb.*; *Brullé*; *Laxmann*; *Westw.*
Papilio, p., *Scopoli.*
Myrmeleon, p., *Linn.*; *Gmel.*; *Laxmann*; *Petagna.*
Ascalaphides, *Lefebvre*, *Mag. Zool.* 1842. *Ramb. Hist. Nat. Ins. Neur.* 341.
Ascalaphidæ et Haplogleniidæ, *Newman.*

Div. 1.

Oculi sulco bipartiti.

Ascalaphus, *Burm.*
Ascalaphi Schizophthalmi, *Lefebvre.*

Subdiv. 1.

Alæ integræ.

Sect. 1.

Alæ anticæ regio costalis basi dilatata, medio angustata.

Group Ascalaphus, *Rambur.*

Subsect. 1.

Alæ densissime reticulatæ, semper opacæ, maculis flavis aut albis.

1. Ascalaphus meridionalis.

Niger; thorace flavo guttato; alis fusco venosis, anticis in basi flavis, striga hyalina infuscata; posticis in basi nigris, in medio flavis, tum hyalinis, gutta flava ante apicem.

Ascalaphus Barbarus, *Oliv. Enc. Méth. Ins.* i. 245, 1.
Ascalaphus Italicus, *Latr. Gen. Crust. et Ins.* iii. 194, 3. *Panz. Faun. Ins. Germ.* iii. 23. *Burm. Handb. Ent.* ii. 1003, 17.

Ascalaphus meridionalis, *Charp. Hor. Ent.* 57, pl. 2, f. 8. *Ramb. Hist. Nat. Ins. Neur.* 344, 1.

a, b. ———? From Mr. Children's collection.
c, d. Italy. Presented by Dr. Dowler.
e. ———? From Mr. Birch's collection.
f. Interlacken. Presented by F. Walker, Esq.
g. ———?

2. Ascalaphus Bæticus.

A. meridionali *simillimus; abdominis appendicibus brevioribus, apice obtusissimis rotundatis, postice extus spinosis.*

Ascalaphus Bæticus, *Ramb. Faune de l'Andalousie*, ii. pl. 9, f. 3; *Hist. Nat. Ins. Neur.* 345, 2.

A. meridionalis var.? Hairs in front of the head and of the occiput cinereous: thorax with only one yellow dot by the junction of the fore-wings, the two beneath more conspicuous: yellow hue of the femora and of the tibiæ more extended, and also that of the wings, which sometimes passes into a whitish hue: some yellow dots on the space between the two spots of the fore-wings: black mark at the base of the hind-wings occupying a much smaller space than in *A. meridionalis.*

a. ———? From Mr. Children's collection.

3. Ascalaphus lacteus.

Niger; thorace flavo guttato; alis anticis hyalinis, dimidio fusco venosis, vitta duplici basali lactea; posticis in basi nigris, tum late lacteis, in apice hyalinis, fusco venosis.

Ascalaphus lacteus, *Brullé, Exped. Scient. de Morée, Zool.* pl. 32, f. 3. *Burm. Handb. Ent.* ii. 1004, 18. *Ramb. Hist. Nat. Ins. Neur.* 345, 3.

Ascalaphus Ottomanus, *Kunze, Germ. Faun. Ins. Europ. fasc.* xxi. pl. 21.

Greece; South Russia.

4. Ascalaphus Italicus.

Niger, flavo maculatus; abdominis segmentorum marginibus flavis; alis fusco venosis, flavo maculatis, basi macula parva nigra.

Ascalaphus Italicus, *Fabr. Ent. Syst.* ii. 95, 2. *Schæff. Apterjungforchen*, 4; *Icon. Ins. Ratisb.* pl. 50, f. 1, 3. *Oliv. Enc. Méth.* iv. 245, 2. *Charp. Hor. Ent.* 57, pl. 2, f. 9. *Ramb. Hist. Nat. Ins. Neur.* 346, 4, pl. 2, f. 3. *Crochard, ed. Cuv. Règ. Anim.* pl. 103, f. 2.

Myrmeleon barbarum, *Petagna, Specim. Ins. Ult. Calabr.* f. 22.

a. South France. Presented by F. Walker, Esq.
b. South France. From Mr. Walker's collection.
c. Sicily.

5. Ascalaphus pupillatus.

A. meridionali *minor; abdominis appendicibus superioribus plus arcuatis; caput magnum, facie et occipite rufo-cinereis; thoracis margine postico guttisque quatuor flavis; tibiæ fere omnino flavæ; alæ posticæ minores, triente basali nigræ.*

Ascalaphus pupillatus, *Ramb. Hist. Nat. Ins. Neur.* 346, 5, pl. 10, f. 7.

South Russia.

6. Ascalaphus rhomboideus.

Niger; capite nigro-villoso, facie fulva griseo-villosa; alis anticis hyalinis, fusco venosis, basi flavis, macula costali parva nigra, et maculis aliquot minutis fuscis in areolis maculam basalem flavam cingentibus; alis posticis totis flavis, macula violaceo-fusca æquali angusta in margine interiore, apice fusco-violaceis, vitta angulari maculam flavam rhomboideam includente; pterostigmatibus nigris; pedibus nigris, tibiis flavis; appendicibus abdominis superioribus forcipatis, inferioribus perminutis. Long. 6½ lin.; alar. 18 lin.

Ascalaphus rhomboideus, *Schneider, Ent. Zeit. Stett.* vi. (1845), 153, 29.

Rhodes.

7. Ascalaphus Kolyvanensis.

Niger; thorace flavo guttato, fronte fulvo-hirto; alis anticis flavo venosis, macula duplici nigra, altera ante basim flavam flavo venosa; posticis flavis, macula basali circuloque lato in apice nigris. Var. *Alarum colore sulphureo et lacteo.*

Myrmèleon Kolyvanensis, *Laxmann, Nov. Comm. Acad. Sci. Imp. Petropol.* xiv. 1, 599, 10, pl. 25, f. 9.
Ascalaphus longicornis var. *Borkh. Scrib. Beytr.* pl. 2, f. 4. *Charp. Hor. Ent.* 56, pl. 2, f. 7. *Burm. Handb. Ent.* ii. 1003, 16.
Ascalaphus oculatus, *Brullé, Exp. Scient. de Morée, Zool.* pl. 32, f. 2.
Ascalaphus Kolyvanensis, *Ramb. Hist. Nat. Ins. Neur.* 347, 6.
Papilio Macaronius? *Scopoli, Ent. Carn.* 168, 446.

East Europe; North Asia.

8. Ascalaphus Hungaricus.

A. Kolyvanensi *simillimus; caput facie et occipite rufescente-pilosis; thorax lineis duabus guttisque octo fulvis; abdomen subtus cano-pilosum; alæ anticæ macula mediana minore flavo reticulata.*

Ascalaphus Hungaricus, *Ramb. Hist. Nat. Ins. Neur.* 347, 7, pl. 10, f. 6.

Hungary.

Subsect. 2.

Alæ densissime reticulatæ, rufescente-flavæ aut fuliginosæ, non distincte maculatæ nec omnino opacæ.

9. Ascalaphus longicornis.

Niger; thorace flavo guttato; ore verticeque albo-hirto; alis infuscatis, flavo venosis; anticis nebecula duplici fusca, posticis in basi nigris, fascia ante apicem arcuata fusca.

Myrmeleon longicornis, *Linn. Syst. Nat.* ii. 914, 2. *Mus. Ulr.* 402.
Ascalaphus longicornis, *Latr. Hist. Nat.* xiii. 28. *Borkh. Scrib. Beytr.* pl. 11, f. 3. *Ramb. Hist. Nat. Ins. Neur.* 348, 8.
Ascalaphus Barbarus, *Fabr. Ent. Syst.* ii. 95, 1. *Burm. Handb. Ent.* ii. 1002, 15. *Charp. Hor. Ent.* 56, pl. 2, f. 7. *Bw.*
Ascalaphus V.-nigrum, *Latr. Gen. Crust. et Ins.* 194, 2.
Ascalaphus Italicus, *Oliv. Enc. Méth. Ins.* i. 345, 2. *Dum. Consid. Gener.* pl. 26, f. 2.

a. Nice. From Dr. Leach's collection.
b. ———? From Mr. Children's collection.
c. South France. From Mr. Walker's collection.
d, *e*. South France.
f. Marseilles.
g, *h*. ———?

10. Ascalaphus Barbarus.

Niger, subtus albo-hirtus; thorace flavo guttato, fronte anoque flavo; alis infuscatis, posticis basi apiceque obscurioribus, venis omnibus flavis.

Ascalaphus Barbarus, *Latr. Gen. Crust. et Ins.* iii. 194, 1. *Ramb. Hist. Nat. Ins. Neur.* 348, 9, pl. 11, f. 4; *Descript. de l'Egypte, Neur.* pl. 3, f. 1. Var.?
Ascalaphus ictericus, *Charp. Hor. Ent.* 59. *Germ. Faun. Europ.* xxi. pl. 22. *Burm. Handb. Ent.* ii. 1002, 14.

a. Italy. Presented by Signor Passerini.
b. ———? From Mr. Birch's collection.

11. Ascalaphus Siculus.

A. barbaro *simillimus; antennæ basi albidæ vel flavicantes; pedes flavi, femoribus basi tibiisque apice vix nigricantibus.*

Ascalaphus Siculus, *Ramb. Hist. Nat. Ins. Neur.* 349, 10.

Sicily.

12. Ascalaphus Corsicus.

A. barbaro *simillimus; antennæ basi flavæ, articulo* 1o *nigro; alæ anticæ pallidiores, venis fuscis marginis postici multiplicatis diffusis areolas plures hyalinas includentibus.*

Ascalaphus Corsicus, *Ramb. Hist. Nat. Ins. Neur.* 349, 11, pl. 11, f. 3.

Corsica.

13. Ascalaphus hispanicus.

A. barbaro *affinis; caput vertice nigro-piloso; facie et occipite albido-pilosis; capitis margine postico nigro flavo unimaculato; thorax punctis sex anticis flavis; abdominis segmentorum margines postici lateribus tantum flavis; alæ fuscescentes, nec flavæ et fuliginosæ.*

Ascalaphus hispanicus, *Ramb. Hist. Nat. Ins. Neur.* 350, 12, pl. 9, f. 4.

Madrid.

Sect. 2.

Alæ anticæ regio costalis non distincte dilatata nec angustata.

Subsect. 1.

Oculorum divisio 1a 2â duplo longior.

Group 1.

Maris abdomen appendiculatum.

Theleproctophylla, *Lefebvre*, *Mag. Zool.* 1842. *Ramb. Hist. Nat. Ins. Neur.* 350.

14. Ascalaphus australis.

Corpus flavo fuscoque variegatum; antennæ nigræ, longitudine corporis; alæ albæ, macula marginali fusca.

Myrmeleon barbarum, *Linn. Syst. Nat.* ii. 914, 5.

Ascalaphus Australis, *Fabr. Mant. Ins.* i. 250, 4; *Ent. Syst.* ii. 96, 50.

Myrmeleon Australis, *Gmel. ed. Syst. Nat.* i. 5, 2645, 14.

Ascalaphus variegatus var.? *Klug, Symb. Phys. dec.* 4, 2, pl. 360, f. 11. *Flavo nigroque variegatus, albido-villosus; alis hyalinis, stigmate fusco.*

Theleproctophylla australis, *Ramb. Hist. Nat. Ins. Neur.* 351.
Syria.
South Europe.

Group 2.

Maris abdomen non appendiculatum.

Puer, *Lefebvre, Mag. Zool.* 1842. *Ramb. Hist. Nat. Ins. Neur.* 352.

15. Ascalaphus maculatus.

Niger; fronte abdominisque cingulis albo-hirtis; alis hyalinis, anticis totis pellucidis, posticis in apice fusco tessellatis.

Ascalaphus maculatus, *Oliv. Enc. Méth. Ins.* i. 246, 6. *Ramb. Hist. Nat. Ins. Neur.* 352, pl. 9, f. 2.
Ascalaphus niger, *Borkh. Scrib. Beytr.* pl. 11, f. 2. *Burm. Handb. Ent.* ii. 1002, 13.

a. Marseilles. From Mr. Walker's collection.

Subsect. 2.

Oculorum divisio 1a 2æ æqualis aut paullo longior.

Group 1.

Tibiarum posticarum calcareis tarsorum articulum 1um superantia.

Bubo, *Ramb. Hist. Nat. Ins. Neur.* 353.

Antennæ somewhat variable in length; club pyriform: spurs of hind-tibiæ shorter than the two first joints; wings not perceptibly widened behind; reticulation large; males of some with, of others without, appendages.

* Abdomen appendicibus cornutis.

16. Ascalaphus agrioides.

Cinereo-fuscus, A. hamato *paullo minor; antennæ rufo-fuscæ; thorax cano-hirtus, maculis rufescentibus; abdomen subglabrum, appendicibus longis biarcuatis; pedes rufo-flavi, nigro varii; alæ angustæ.*

Ascalaphus agrioides, *Ramb. Faune de l'Andalousie*, ii. pl. 9, f. 2.
Bubo agrioides, *Ramb. Hist. Nat. Ins. Neur.* 353, 1.
Proctarrelabis? agrioides, *Lefebvre, Mag. Zool.* 1842.

a, *b*. Malaga. Presented by Benjamin Freud, Esq.

17. Ascalaphus hamatus.

Niger, cinereo-villosus; thorace maculis, abdomine segmentis apice flavis, forcipe elongata, flexuosa, subtus appendiculata flava, nigro-villosa; alis basi stigmateque flavis.

Ascalaphus hamatus, *Klug, Symb. Phys. dec.* 4, pl. 36, f. 10; *Descript. de l'Egypte, Neur.* 3, f. 2?
Bubo hamatus, *Ramb. Hist. Nat. Ins. Neur.* 354, 2.
Theleproctophylla hamatus, *Lefebvre, Mag. Zool.* 1842.

Syria, Egypt.

** Abdomen appendicibus non cornutis. Antennæ basi verticillato-pilosæ.

18. Ascalaphus capensis.

Fuscus, dorso maculato, subtus albo-hirtus; pedibus annulatis; alarum limbo antico fusco punctato.

Ascalaphus capensis, *Fabr. Sp. Ins.* i. 400, 3; *Ent. Syst.* ii. 96, 3.
Ascalaphus capensis? *Burm. Handb. Ent.* ii. 1002, 12.

Ascalaphus annulicornis? *Burm. Handb. Ent.* ii. 1001, 11. *Fuscus, luteo maculatus, cinereo-hirtus; antennis pedibusque annulatis; alis hyalinis, nigro venosis, venis transversis inter costam et subcostam infuscatis.*

Bubo capensis, *Ramb. Hist. Nat. Ins. Neur.* 354, 3.
Proctarrelabis capensis, *Lefebvre, Mag. Zool.* 1842.
Proctarre annulicornis, *Lefebvre, Mag. Zool.* 1842.

Cape.

19. Ascalaphus rhodiogrammus.

A. capensi *affinis, paullo major; antennæ breviores, clava nigricante apice flava; thorax rufo-fuscus, macula dorsali flavescente; abdomen maculis ferro-equinis nigro-velutinis; pedes rufescentes; alæ sat longæ, venis fuscis, 2a 3a que rufescentibus horum intervallo stigmateque roseis.*

Bubo rhodiogrammus, *Ramb. Hist. Nat. Ins. Neur.* 355, 4.

Cape.

*** Antennæ basi nudæ.

20. Ascalaphus Javanus.

Fuscus, vitta dorsali lata flava; alis subfulvis, stigmatibus fuscis; antennis fuscis, clava nigra; Mas *obscurior, alis fulvo-auratis; cercis analibus brevibus uncinatis;* Fœm. *dilutior, lætius colorata, alis hyalinis, radio cum subcosta fulvo, venis reliquis stigmatibusque nigris.*

Ascalaphus Javanus, *Vand. Lind.; Burm. Handb. Ent.* ii. 1001, 10.
Bubo Javanus, *Ramb. Hist. Nat. Ins. Neur.* 355, 5.
Hybris Javanus, *Lefebvre, Mag. Zool.* 1842.

Java.

a. ——— ?

**** Abdomen appendicibus nullis.

21. Ascalaphus festivus.

Flavus; caput magnum; antennæ rufæ, nigro annulatæ, clava obscura; thorax nigro bivittatus; abdomen nigro varium; alæ hyalinæ, venis rufis, stigmate fuscescente.

Bubo festivus, *Ramb. Hist. Nat. Ins. Neur.* 356, 6.

Senegal, Madagascar.

22. Ascalaphus flavipes.

Flavo fuscoque varius; antennæ nigricantes, basi et ante clavam flavicantes; pedes flavi, tarsis obscurioribus; alæ immaculatæ, nigro reticulatæ, stigmate flavo.

Ascalaphus flavipes, *Leach, Zool. Miscell.* i. 48, pl. 20.
Bubo flavipes, *Ramb. Hist. Nat. Ins. Neur.* 357, 7.
Subpalasca flavipes, *Lefebvre, Mag. Zool.* 1842.

a, b. New Holland.

The two preceding species belong to the last division; the following twenty-eight species also form part of the subsection *Bubo*, but are not included in its subdivisions.

23. Ascalaphus versicolor.

Fuscus, luteo maculatus; antennis longissimis pallidis, segmentis in apice nigris, ante clavam albidam infuscatis; alis stigmate fusco.

Ascalaphus versicolor, *Burm. Handb. Ent.* ii. 1000, 4.
Subpalasca versicolor, *Lefebvre, Mag. Zool.* 1842.

Brazil.

24. Ascalaphus tessellatus.

Niger; capite pone oculos fulvo; facie fusca; oculorum parte supera infera multo majori; prothorace fascia tenui, mesothorace maculis 5, metathorace 3 transversis, flavis; antennis fulvis apice magno pyriformi nigro; abdomine nigro dilatato, dorso serie macularum, lateribusque versus basim et apicem maculis flavis; alis subfulvescentibus stigmate nigro, venis versus basim fusco tinctis maculaque parva discali fusca notatis; abdomine ut videtur haud appendiculato.

Ascalaphus (Ogcogaster) tessellatus, *Westw. Cab. Orient. Ent.* pl. 34, 1.

a, b. East Indies. From Mr. James' collection.
c, d. East Indies. From Mr. Stevens' collection.

25. Ascalaphus segmentator.

Flavus; facie vix pilosa; oculis antennisque fuscis, harum apice fere rotundato; thorace supra lineis longitudinalibus et transversis nigris notato; abdominis segmentis dorso fascia tenui basali alteraque subapicali latiori nigris, lateribus dilatatis nigro striatis; pedibus fulvis, tarsis fuscis; alis subflavescentibus stigmate lineaque subcostali, basique flavis, venis transversis costalibus subcostalibus et basalibus fusco tinctis.

Ascalaphus (Ogcogaster), *Westw. Cab. Orient. Ent.* pl. 34, f. 2.

a. East Indies. Presented by J. C. Dale, Esq.
b, c. East Indies. From Mr. Sowerby's collection.
d—f. East Indies. From Mr. Stevens' collection.

26. Ascalaphus dentifer.

Niger; capite pone oculos luteo; thorace vitta longitudinali subinterrupta flava; mesothoracis scutelli marginibus, punctoque inter hoc et alarum basim flavis; abdomine vitta longitudinali dorsali interrupta margineque postico segmentorum flavis; calcaribus posticis brevibus; alis subfusco-hyalinis, basi extremo flavis, stigmate nigro, posticis pone stigma fusco magis tinctis, anticis prope basim marginis postici dente parvo instructis.

Ascalaphus (Ogcogaster?) dentifer, *Westw. Cab. Orient. Ent.*

a. East Indies. From Mr. Stevens' collection.

27. Ascalaphus angulatus.

Niger; capite pone oculos luteo; antennis valde elongatis pallide fuscis apice nigricantibus; facie, ore, pedibusque nigris; thoracis dorso flavo lateribus antice nigris, mesoscutello vittis duabus obliquis nigris, abdominis dorso fulvo segmentis ante apicem fascia tenui nigra, margine postico pallidis, apice obscuriori; alis subhyalinis, stigmate fusco, basi extremo subfulvis; anticis prope basin marginis postici angulatis. Long. alar. 36 lin.

Ascalaphus (Ogcogaster?) angulatus, *Westw. Cab. Orient. Ent.*

Assam.

28. ASCALAPHUS CANIFRONS.

Fuscus; facie dense cano-hirto, ore subfulvo; capite postice fulvo fusco variegato; thorace etiam fulvo vario; antennis fuscis, apice dilatato subtriangulari; abdomine supra fulvo vitta tenui dorsali nigra; pedibus fulvis, basi femorum obscuro; alis parum venosis pellucidis hyalinis, stigmate parvo subfusco.

Ascalaphus (Bubo) canifrons, *Westw. Cab. Orient. Ent.* pl. 34, f. 3.

East Indies.

29. ASCALAPHUS INVOLVENS.

uscus, fusco-hirtus; caput ferrugineum, cano-hirtus, apud antennas nigro hirtum; antennæ ferrugineæ, subtus testaceæ, basi piceæ et verticillato pilosæ, clava testaceo notata; thorax subtus cano-hirtus; abdomen latum, fusiforme; pedes nigri, tibiis apud medium femoribusque ferrugineis; alæ sublimpidæ, anticæ margine postico basi excavato, posticæ fusco maculatæ et fasciatæ.

Brown, clothed with brown hairs: head ferruginous, clothed with hoary hairs; a tuft of black hairs at the base of the antennæ: antennæ shorter than the wings, ferruginous above, testaceous beneath, pitchy and verticillate pilose towards the base; club broad, partly testaceous: thorax clothed beneath with hoary hairs: abdomen broad, fusiform, about half the length of the wings: legs black; tibiæ about the middle and femora ferruginous: wings nearly limpid; stigma brown, with three or four veins; subcostal region slightly decreasing in breadth from near the base to near the stigma where it again widens: fore-wings excavated on the hind border at the base, slightly tinged with brown along the hind border, and with a small brown spot behind the stigma: hind-wings much shorter but very little narrower than the fore-wings, with a row of brown spots along the subcostal region, and with a broad oblique brown band behind the stigma from whence it extends diffusedly along the hind border; broadest part at little before half the length. Length of the body 10½ lines; of the wings 30 lines.

a, *b*. Port Natal. From Mr. Gueinzius' collection.
c, *d*. Port Natal. From Mr. Stevens' collection.

Var. ? Alæ posticæ immaculatæ.
e. ——— ?

30. Ascalaphus rufopictus.

Rufus, crassus; caput magnum, apud antennas fusco-hirtum; oculi magni; antennæ læte rufi; clava lata nigra; thorax albido-hirtus, antice fusco-hirtus; abdomen lateribus ventreque piceis; pedes læte rufi, tarsis nigris; alæ albo-hyalinæ, subangustæ, stigmate rufo, venis testaceis.

Red, stout: head large, bright red behind, with some brown hairs about the base of the antennæ: eyes large: antennæ bright red, very much shorter than the wings; club broad, black: thorax clothed with whitish hairs, and with a band of brown hairs in front: abdomen much shorter than the wings, pitchy on each side and beneath, and with a pitchy dot near the hind border of each segment: legs bright red, stout; tarsi black: wings whitish hyaline, rather narrow; stigma bright red, rather large, with five veins; veins testaceous, red at the base; subcostal region slightly decreasing in breadth from near the base to the middle of the wing, parallel from thence to the stigma: hind-wings much shorter but very little narrower than the fore-wings. Length of the body 15½ lines; of the wings 38 lines.

a. Sierra Leone. Presented by the Rev. D. F. Morgan.

31. Ascalaphus dicax.

Fuscus, fusco-hirtus; caput flavum, antice flavo-hirtum, vertice nigro; antennæ nigræ; thorax marginibus, scutello lateribusque flavis; abdomen luteum, fusiforme, vitta dorsali maculisque nigris; pedes flavi, tibiis posterioribus femoribusque mediis nigro strigatis, tarsis posticis ferrugineis; alæ limpidæ, stigmate maculaque postica fuscis.

Brown, clothed with brown hairs: head yellow, clothed with yellow hairs in front; vertex black, shining: antennæ black, very much shorter than the wings: thorax bordered with yellow on most of the segments; scutellum of the mesothorax and of the metathorax and sides yellow: abdomen luteous, fusiform, much shorter

than the hind-wings, with a black dorsal stripe, black also on the hind borders of the segments and with some black marks on each side: legs yellow; posterior tibiæ and middle femora with black streaks; hind-tarsi ferruginous: wings limpid; stigma dark brown, large, with six veins; veins black: fore-wings with the subcostal region decreasing in breadth from near the base to half the length of the wing, slightly widening from thence to the stigma: hind-wings a little narrower and much shorter than the fore-wings; subcostal region decreasing in breadth from near the base to less than half the length of the wing, parallel from thence to the stigma, adjoining which there is a brown mark. Length of the body 12 lines; of the wings 26 lines.

a. North India. From Mr. Stevens' collection.

32. Ascalaphus sinister.

Ferrugineus; caput flavum, antice albo-hirtum, vertice nigro fasciculato; thorax vitta dorsali lateribus pectoregue flavis; abdomen luteum, longifusiforme, vittis duabus strigisque nonnullis nigris; pedes flavi, tarsis testaceis; alæ limpidæ, basi subflavescentes, apud costam subluridæ.

Pale ferruginous, clothed with brown hairs: head yellow, clothed with white hairs in front; a tuft of black hairs on the vertex: antennæ ferruginous, shorter than the wings; club wanting: thorax yellow on each side and beneath and with a yellow dorsal stripe: abdomen elongate-fusiform, luteous, much shorter than the hind-wings, with two black dorsal stripes, and with some black streaks on each side: legs yellow; tarsi testaceous: wings limpid, with a yellowish tinge at the base, and a more slight lurid tinge on the subcostal region; stigma brown, with five veins; veins black; subcostal region decreasing in breadth from near the base to the middle of the wing, from thence to the stigma slightly widening in the fore-wings, parallel in the hind-wings, which are a little narrower and much shorter than the fore-wings. Length of the body 12 lines; of the wings 26 lines.

a. North India. From Mr. Stevens' collection.

33. Ascalaphus immotus.

Fuscus; caput fulvum, albo-hirtum, antice subtusque flavum; antennæ nigræ, basi fulvæ; thorax æneo-fuscus, flavo varius; abdomen flavum, vittis duabus lateralibus unaque ventrali nigris; pedes flavi; alæ limpidæ, breviusculæ, basi subflavescentes.

Brown, clothed with brown hairs: head tawny, clothed with white hairs, pale yellow in front and beneath, with some black hairs on the vertex: antennæ black, very slender, tawny at the base, much shorter than the wings; club broad: thorax slightly æneous, with an interrupted yellow stripe, and with yellow marks on each side and on the hind borders of the segments: prothorax and metathorax almost wholly yellow: abdomen yellow, very much shorter than the wings, with a black stripe interrupted by yellow spots on each side, and one beneath: legs yellow; tarsi tawny towards the tips: wings limpid, rather short, with a very slight yellow tinge at the base; stigma dark brown, comprising six veins; subcostal region decreasing in breadth from near the base to half the length of the wing, from whence to the stigma it is parallel: hind-wings shorter and narrower than the fore-wings, broadest before half the length. Length of the body 9 lines; of the wings 26 lines.

a. China. Presented by G. T. Laye, Esq.

34. Ascalaphus procax.

Ferrugineus, fulvo-hirtus; caput flavum, antice albo-hirtum, vertice ferrugineo fusco-hirto; antennæ ferrugineæ, clava lata nigra; pectus testaceum; abdomen rufescens, subtus nigro vittatum; pedes testacei; alæ limpidæ, sublatæ, stigmate flavo.

Ferruginous, thickly clothed with tawny hairs: head pale yellow, clothed in front with white hairs; vertex ferruginous, clothed with brown hairs: antennæ ferruginous, much shorter than the wings; club broad, black: thorax testaceous beneath: abdomen reddish, with a black stripe beneath, much shorter than the hind-wings: legs testaceous: wings limpid, rather broad; stigma pale yellow, with five veins in the fore-wings, and with four veins in the hind-wings; veins black, those towards the base and the whole of the subcosta and of the radius testaceous; subcostal region of the fore-wings slightly decreasing in breadth from near the base to half the

length of the wing and more slightly widening from thence to the stigma, of the hind-wings decreasing in breadth to half the length and parallel from thence to the stigma: hind-wings narrower and much shorter than the fore-wings. Length of the body 12? lines; of the wings 29 lines.

a. Nepaul. From the Hardwicke bequest.

35. Ascalaphus odiosus.

Fulvus, fulvo-hirtus; caput flavum, subtus albido-hirtum, vertice nigro-hirto; antennæ ferrugineæ, clava picea; pectus testaceum; abdomen piceo bivittatum; pedes testacei; alæ limpidæ, parvæ.

Tawny, clothed with tawny hairs: head yellow and clothed with whitish hairs beneath; a tuft of black hairs in front of the vertex: antennæ ferruginous, much shorter than the wings; club pitchy: thorax testaceous beneath: abdomen slender, with a pitchy stripe on each side, nearly as long as the hind-wings; legs testaceous: wings limpid, short and narrow; stigma ferruginous, with five veins; veins black; subcosta and radius tawny; subcostal region decreasing in breadth from near the base to half the length of the wing, from whence to the stigma it again, but more slightly, widens: hind-wings a little narrower and much shorter than the fore-wings. Length of the body 12 lines; of the wings 26 lines.

a. North Bengal. From Miss Campbell's collection.

36. Ascalaphus verbosus.

Piceus, fusco-hirtus; caput nigrum flavo varium, antice testaceum, vertice nigro fasciculato; antennæ piceæ, basi fulvæ, clava testacea apice nigra; pectus ferrugineum, cano-hirtum; abdomen nigrum, longifusiforme, maculis lateralibus flavis; pedes ferruginei, tarsis piceis; alæ limpidæ, sublatæ, stigmate nigro.

Pitchy, clothed with brown hairs: head black, pitchy, with a yellow spot on each side behind, shining in front, yellow about the eyes, testaceous towards the mouth; a tuft of black hairs on the vertex: antennæ pitchy, tawny at the base, much shorter than the wings; club testaceous, black towards the tip: thorax ferruginous and clothed with hoary hairs beneath: abdomen black, elongate-fusiform, shorter than the hind-wings, with a row of yellow spots along

each side: legs ferruginous; tibiæ darker than the femora; tarsi pitchy: wings limpid, rather broad, stigma and veins black; subcostal region decreasing in breadth from near the base to half the length of the wing, parallel from thence to the stigma; hind border rather convex towards the base: hind-wings narrower and much shorter than the fore-wings. Length of the body 12 lines; of the wings 26 lines.

a. North Bengal. From Miss Campbell's collection.

37. Ascalaphus sabulosus.

Niger, cinereo-hirtus, subtus cano-hirtus; caput antice flavum; antennæ basi fulvæ, clava latissima testaceo fasciata; abdomen nigro-hirtum, lateribus luteo maculatis et cano fasciculatis; pedes fulvo varii, tibiis anticis supra testaceis; alæ limpidæ, parvæ, stigmate nigricante.

Black: head and thorax thickly clothed with gray hairs above and with hoary hairs beneath: head yellow in front and about the eyes: antennæ black, comparatively thick, much shorter than the wings, tawny at the base, with a few hairs along the whole length, more towards the base; club very broad, with testaceous bands: abdomen much shorter than the wings, clothed with short black hairs, and along each side with tufts of hoary hairs; hind borders of the segments with a luteous spot on each side: legs black; femora at the tips, tibiæ and tarsi at the base and at the tips tawny; fore-tibiæ testaceous above: wings limpid, rather short and narrow, yellow at the base; stigma blackish, comprising four veins; veins black; subcostal region decreasing in breadth from near the base to the stigma: hind-wings shorter but not narrower than the fore-wings; hind border very slightly convex. Length of the body 14 lines; of the wings 34 lines.

a. Adelaide. Presented by the Entomological Club.

38. Ascalaphus importunus.

Fuscus, gracilis, fusco-hirtus; caput apud oculos testaceum, subtus albido-hirtum, vertice nigro-hirto; antennæ nigræ, gracillimæ, basi testaceæ, apicem versus testaceo fasciatæ; abdomen ferrugineum, gracillimum, subtus piceum marginibus posticis testaceis; pedes testacei, tarsis ferrugineis, femoribus posticis piceis; alæ angustæ, sat longæ; stigma flavum, in alis posticis fusco maculatum.

Brown, slender, clothed with brown hairs: head testaceous on each side by the eyes in front and beneath, with black hairs about the base of the antennæ and with whitish hairs beneath; antennæ black, very slender, much shorter than the wings, testaceous towards the base, and with a testaceous band adjoining the club which is broad: abdomen ferruginous, very slender, much shorter than the wings; under side pitchy, with the hind borders of the segments testaceous: legs testaceous; tarsi ferruginous; hind-femora pitchy with testaceous tips: wings narrow, rather long, with an indistinct lurid tinge, yellow at the base; stigma yellow, with five veins: veins black; subcostal region slightly decreasing in breadth from near the base unto near the stigma where it again widens; hind-wings narrower and much shorter than the fore-wings; stigma partly brown; subcostal region narrower. Length of the body 12 lines; of the wings 28 lines.

a. ——— ?

39. Ascalaphus profanus.

Fuscus, fusco-hirtus; caput nigrum, antice albido-hirtum, lateribus anticis flavis, facie testacea; antennæ nigræ, gracillimæ, clava lata basi testacea; abdomen nigro-piceum, subtus testaceo bivittatum; pedes testacei, tarsis nigris; alæ limpidæ, longæ, stigmate fusco, anticæ margine postico basi excavato; posticæ apice sublimpidæ.

Brown, clothed with brown hairs: head black, clothed in front with whitish hairs, yellow about the lower part of the eyes; face testaceous: antennæ black, very slender, much shorter than the wings; club broad, testaceous at the base: abdomen pitchy-black, very much shorter than the wings, with an interrupted testaceous stripe on each side beneath: legs testaceous; tarsi black: wings limpid, long; stigma dark brown, with five veins; veins black: wings with a short and deep excavation on the hind border at the base; subcostal region slightly decreasing in breadth from near the base to the stigma: hind-wings narrower and very much shorter than the fore-wings, less limpid towards the tips; subcostal region much decreasing in breadth from near the base to the stigma. Length of the body 12 lines; of the wings 32 lines.

a. East Indies. From Mr. Sowerby's collection.

40. Ascalaphus nimius.

Fuscus, albido-hirtus; caput testaceum, postice flavum, lateribus anticis albido-flavis; antennæ ferrugineæ, testaceo annulatæ, apicem versus intus denticulatæ, clava nigra subtus testacea; prothorax flavus; mesothorax flavo bivittatus; metathorax univittatus; abdomen ferrugineum, basi flavum; pedes flavi, tarsis nigris; alæ subfulvescentes, posticæ apud cubitus subfuscescentes.

Brown, clothed with whitish hairs: head testaceous, yellow behind, whitish yellow on each side in front: antennæ ferruginous, shorter than the wings; joints with testaceous bands, denticulate on the inner side towards the tips; club broad, mostly black above, testaceous beneath: thorax beneath and prothorax yellow; mesothorax with two interrupted yellow stripes: metathorax with one yellow stripe: abdomen ferruginous, slender, yellow at the base, shorter than the wings: appendages slightly curved, armed with black spines: legs yellow; tarsi black: wings with a very slight tawny tinge which appears most on the hind-wings about the borders of the veins; stigma brown, small, comprising four veins; veins black; subcostal region decreasing in breadth from near the base to half the length of the wing, parallel from thence to the stigma: hind-wings most tinged with brown along the cubitus, shorter and a little narrower than the fore-wings. Length of the body 13 lines; of the wings 29 lines.

a. North Bengal. From Miss Campbell's collection.

41. Ascalaphus insimulans.

Ferrugineus, fusco-hirtus; caput postice testaceum, antice flavum flavoque hirtum, vertice fusco; antennæ nigræ, basi ferrugineæ et verticillato pilosæ, clava atra latissima; thorax piceo quadrimaculatus; abdomen piceum, subtus ferrugineum; pedes testacei; alæ limpidæ, breves, basi subflavescentes, stigmate nigricante, anticæ margine postico basi excavato.

Bright ferruginous, thinly clothed with brown hairs: head testaceous behind, yellow and clothed with yellow hairs in front; vertex brown: antennæ black, slender, ferruginous and verticillate pilose towards the base, much shorter than the wings; club deep

black, very broad: thorax with two pitchy spots on each side, one above the base of each wing; under side almost testaceous, pitchy in the disk: abdomen slender, pitchy, shining, almost bare, ferruginous beneath, nearly as long as the hind-wings: legs testaceous: wings limpid, short, with a slight yellow tinge at the base; stigma blackish, long, with six veins; subcostal region decreasing in breadth from near the base to the middle of the wing, parallel from thence to the stigma: fore-wings with the hind border excavated at the base: hind-wings narrower and much shorter than the fore-wings. Length of the body 13 lines; of the wings 25 lines.

a. North India. From Mr. Stevens' collection.

42. ASCALAPHUS SUBTRAHENS.

Fuscus, fusco-hirtus, subtus albo-hirtus; caput apud antennas nigro-hirtum, lateribus anticis, epistomate flavo; antennæ nigræ, gracillimæ, basi flavæ, clava flava apice nigra; thorax flavo bimaculatus et marginatus; abdomen nigrum, luteo vittatum; pedes nigri, femoribus anterioribus flavis; alæ limpidæ, longæ, anticæ margine postico basi excavato.

Brown, clothed above with brown hairs, beneath with white hairs: head with black hairs about the base of the antennæ, yellow behind, white on each side in front; epistoma yellow: antennæ black, very slender, very much shorter than the wings, yellow towards the base; club yellow with black tip: thorax with two large yellow spots, one on the scutum, the other on the scutellum; hind borders of the prothorax and of the mesothorax yellow: abdomen black, clothed with short hairs, shorter than the wings, with a luteous interrupted stripe above, and one on each side beneath towards the base: legs black; anterior femora yellow: wings limpid, long; stigma dark brown, comprising four veins; veins black, yellow at the base; radial region very slightly lurid: fore-wings with the subcostal region very slightly decreasing in breadth from near the base to the stigma; hind border excavated at the base: hind-wings shorter and narrower than the fore-wings; subcostal region almost parallel from the base to the stigma; hind border ciliated at the base. Length of the body 14 lines; of the wings 36 lines.

a. Adelaide. Presented by the Entomological Club.

43. Ascalaphus accusans.

Piceus; caput supra testaceum, apud antennas nigro-hirtum; antennæ ferrugineæ, longæ, clava nigra; thorax supra flavus, nigro varius, subtus flavo fasciatum; abdomen luteo vittatum, lateribus subferrugineis; pedes nigri; alæ hyalinæ, longæ, sat latæ, stigmate magno fusco.

Pitchy: head testaceous above, clothed with black hairs about the base of the antennæ: antennæ ferruginous, long, slender, shorter than the wings; club black: thorax yellow above, clothed with black hairs on each side in front: prothorax with a black band: mesothorax with a black oblique stripe on each side; under side with a short slightly oblique yellow band on each side extending to the base of the fore-wing: abdomen long, shorter than the wings, with a luteous dorsal stripe, slightly ferruginous along each side: legs black: wings hyaline, long, rather broad; stigma dark brown, large, comprising six veins; veins black; subcostal region slightly decreasing in breadth from near the base to the middle of the wing, and increasing from thence to the stigma; hind-wings shorter and narrower than the fore-wings. Length of the body 16 lines; of the wings 38 lines.

a. Silhet. From the Rev. J. Stainforth's collection.

44. Ascalaphus subjacens.

Fuscus, fusco-hirtus; caput ferrugineum, apud antennas nigro-hirtum, vertice testaceo; antennæ nigræ, longissimæ; thorax vitta dorsali flava; pectus flavo fasciatum; abdomen flavo vittatum; pedes ferruginei; alæ longæ, limpidæ.

Brown, clothed with brown hairs; head ferruginous, clothed with black hairs about the base of the antennæ; vertex testaceous: antennæ black, slender, very long, a little shorter than the wings: thorax with a broad yellow dorsal stripe, widest on the scutellum where it contains an oblique pale brown streak on each side; some yellow marks on each side of it about the base of the wings; under side with a broad yellow band between the fore-wings: abdomen shorter than the wings, with a narrow yellow dorsal stripe which tapers from the base to the tip: legs ferruginous: wings limpid, long; stigma brown, comprising six veins; subcostal region slightly decreasing in breadth from near the base to half the length of the

wing where it again slightly widens towards the stigma: hind-wings shorter and narrower than the fore-wings, widest at a little before half the length. Length of the body 14 lines; of the wings 36 lines.

a. China. Presented by G. T. Laye, Esq.

45. Ascalaphus trux.

Fuscus, nigro-hirtus; caput postice testaceum; antennæ testaceæ, basi intus denticulatæ, apice obscuriores, clava nigra; thorax testaceo varius; pectus fasciis quatuor obliquis lateralibus flavis; abdomen nigro testaceoque varium; pedes picei, femoribus basi testaceis, tibiis posticis testaceo maculatis, tarsis nigris; alæ longæ, limpidæ.

Group Acheron, *Lefebvre.*

Brown, clothed with blackish hairs: head testaceous brown, testaceous behind, thickly clothed about the base of the antennæ with black hairs: antennæ testaceous, slender, shorter than the wings, darker towards the club which is black; joints armed on the inner side with teeth which successively decrease in size from the base and disappear at one-third of the length: segments of the thorax adorned with testaceous streaks and borders: metathorax mostly testaceous; underside with two bright yellow oblique bands on each side: abdomen nearly as long as the wings, testaceous with black marks towards the base, black with testaceous marks towards the tip: legs pitchy; femora testaceous at the base; a testaceous spot on each hind-tibia; tarsi black: wings limpid, long; stigma pale brown, comprising five or six veins; subcostal region very slightly tinged with brown, very narrow and of equal breadth from the base to the stigma: hind-wings shorter but not narrower than the fore-wings; hind border slightly convex towards the base. Length of the body 20 lines; of the wings 36 lines.

a. ——— ?

46. Ascalaphus luctifer.

Fuscus, fusco-hirtus; caput flavum cano-hirtum, vertice piceo; antennæ nigræ, gracillimæ, clava latissima; thorax flavo bivittatus, subtus cano-hirtus; abdomen testaceum, lateribus nigricantibus; pedes testacei, tarsis nigris; alæ limpidæ, sat longæ, stigmate fusco, anticæ margine postico basi excavato, posticæ fusco bistrigatæ.

Brown, clothed with brown hairs: head yellow, clothed with hoary hairs; vertex pitchy, with brown hairs: antennæ black, very slender, much shorter than the wings; club very broad: thorax with two irregular yellow stripes which are partly united; underside clothed with hoary hairs: abdomen testaceous, blackish along each side, much shorter than the wings: legs testaceous; tarsi black: wings limpid, rather long; stigma brown; veins black; subcostal region decreasing in breadth from near the base to half the length of the wing, parallel from thence to the stigma; radial region tinged with brown; fore-wings excavated at the base of the hind border: hind-wings shorter but very little narrower than the fore-wings, with two pale brown oblique streaks, one along the cubitus, the other beyond and diffused towards the tip. Length of the body 13 lines; of the wings 33 lines.

a. North India. From Mr. Stevens' collection.

47. Ascalaphus nugax.

Fuscus, fusco-hirtus; caput ferrugineum; antennæ nigræ; thorax flavo vittatus; pectus flavo bifasciatum; pedes ferruginei; alæ longæ, apud costam fulvæ, stigmate fusco, anticæ margine postico anguste dilatato, posticæ apice fulvæ.

Brown, thickly clothed with rather long brown hairs: head ferruginous; epistoma paler: antennæ black, long, shorter than the wings: thorax with a broad yellow dorsal stripe, and on each side beneath with two oblique yellow bands: abdomen wanting: legs ferruginous: wings long; stigma dark brown, rather large, with six or seven veins; veins black: fore-wings bright tawny along the costa from the base to the stigma, with a slender, acute angular dilatation near the base of the hind border: subcostal region decreasing in breadth from near the base to the middle of the wing, widening from thence to the stigma: hind-wings shorter and narrower than the fore-wings, bright tawny in front along the whole length and about the tips; subcostal slightly decreasing in breadth from near the base to the middle, parallel from thence to the stigma. Length of the wings 36 lines.

a. Ceylon. Presented by R. Templeton, Esq.

48. Ascalaphus loquax.

Ferrugineus, nigro-hirtus; antennæ clava nigra; thorax fusco varius; pectus fascia arcuata testacea; abdomen rufum, subtus testaceum, apicem versus nigro varium; tarsi nigri; alæ amplæ, basi fuscæ, anticæ apud costam fusco-fulvæ, posticæ fulvæ.

Ferruginous, clothed with black hairs: antennæ ferruginous or tawny, much shorter than the wings; club black: thorax with some brown marks on the disks of the segments; underside with a curved testaceous band: abdomen red, testaceous beneath, black on each side towards the tip, much shorter than the wings: legs ferruginous, stout; tarsi black: wings ample, brown at the base; stigma dark brown, large, with six veins; veins black; subcostal region decreasing in breadth from near the base to the middle of the wing, hardly widening from thence to the stigma: fore-wings brownish tawny along the fore border from the base to the stigma, and with an indistinct lurid tinge over half the surface from the base: hind-wings shorter but hardly narrower than the fore-wings, bright tawny except at the tips. Length of the body 17 lines; of the wings 42 lines.

a. Brazil.
b. ———?

49. Ascalaphus anticus.

Ferrugineus, nigro-hirtus; antennæ fulvæ, longæ, clava lata nigra; thoracis segmenta testaceo notata et marginata; pectus flavo fasciatum; abdomen gracile, subtus basi testaceum; alæ limpidæ, amplæ, basi fuscæ, apice subangulatæ, stigmate magno subfusco.

Dark ferruginous, clothed with black hairs: head paler: antennæ tawny, long, shorter than the wings; club broad, black: segments of the thorax with dark testaceous marks on their disks and borders; underside with a curved yellow band: abdomen ferruginous, slender, shorter than the wings, testaceous beneath at the base: legs dark ferruginous: wings limpid, ample, dark brown at the base, slightly angular at the tips; stigma large, pale brown, with five or six veins; veins black; radius tawny; subcostal region decreasing in breadth from near the base to half the length of the wing, slightly widening from thence to the stigma: hind-wings

rather less limpid and shorter but not narrower than the fore-wings. Length of the body 16 lines; of the wings 38 lines.

a. Bengal.

50. Ascalaphus longus.

Fuscus, nigro-hirtus; caput ferrugineum; antennæ piceæ, basi ferrugineæ et intus denticulatæ, clava nigra lata; thorax ferrugineo notatus, postice ferrugineus, subtus testaceo fasciatus; abdomen longissimum, alis anticis paullo longius, basi subtus ferrugineum vel testaceum; pedes picei, tarsis nigris; alæ subhyalinæ vel subfuscæ, basi nigro-fuscæ.

Dark brown, clothed with black hairs: head ferruginous: antennæ pitchy, much shorter than the wings, ferruginous and denticulated on the inner side towards the base; club broad, black: thorax with some ferruginous marks; hind part ferruginous; underside with a curved testaceous band: abdomen very long, a little longer than the fore-wings, ferruginous or testaceous beneath at the base: legs pitchy; tarsi black: wings subhyaline or pale brown, dark brown at the base; stigma dark brown, large, with six veins; veins black: subcostal region slightly decreasing in breadth from near the base to the middle, and again slightly widening from thence to the stigma: hind-wings shorter but very little narrower than the fore-wings. Length of the body 20 lines; of the wings 34—36 lines.

a, *b*. Bengal.

Group 2.

Tibiarum posticarum calcaria tarsorum articulis 1o ad 4um vix breviora.

* Alæ posticæ non dilatatæ.

Subpalasca, *Lefebvre, Mag. Zool.* 1842.
Ulula, *Ramb. Hist. Nat. Ins. Neur.* 357.

Labium almost quadrilateral, having on each side of its upper border a tuft of thick bristles bent at their tips and almost like spines: last joint of labial palpi a little sinuated and unequal towards its tip: feelers variable in length, with whorls of hairs at their

base; club pyriform, solid: spurs of the hind-tibiæ as long as the four first joints of the tarsi: wings narrow; reticulation rather diffuse: appendages of the male short, thick, bristly, hardly prominent.

51. Ascalaphus Macleaynus.

Ferrugineo-rufescens, fusco maculatus; ventre cinereo; antennæ nigricantes, clava subtus pallida; pedes rufescentes; alæ hyalinæ immaculatæ.

Ascalaphus Macleaynus, *Lansd. Guild. Trans. Linn. Soc.* xiv. 140, pl. 7, f. 11.

Ascalaphus quadripunctatus? *Burm. Handb. Ent.* ii. 1001, 9? *Fuscus; capite et thorace cinereo-hirto; alis hyalinis, stigmatibus albis, posticis maculis duabus fuscis, altera pone stigma, altera in margine postico.*

Ascalaphus senex, *Burm. Handb. Ent.* ii. 1001, 7.? *Luteo-fuscus; abdomine obscuriori; thorace capiteque cinereo-hirto; antennis longitudine corporis, nigris, clava in apice albida; alis hyalinis, stigmatibus fuscis.*

Ulula senex? *Ramb. Hist. Nat. Ins. Neur.* 357, 1.

a, b. Jamaica. From Mr. Gosse's collection.

52. Ascalaphus vetula.

Fuscus; caput parvum; antennæ rufæ, nigro annulatæ, clava nigricante; thorax rufo varius; abdomen supra nigrum, maculis lateralibus fulvis; pedes flavi, femoribus rufis; alæ hyalinæ.

Ulula vetula, *Ramb. Hist. Nat. Ins. Neur.* 358, 2.

Campos-Geraes.

53. Ascalaphus limbatus.

Fuscus, luteo maculatus, cinereo-hirtus; alis hyalinis, stigmatibus nigris, posticorum limbo interno apiceque fusco.

Ascalaphus limbatus, *Burm. Handb. Ent.* ii. 1001, 8.
Ulula limbata, *Ramb. Hist. Nat. Ins. Neur.* 358, 5.

Brazil.

54. Ascalaphus microcephalus.

Obscure rufescens, cano-pilosus; caput parvum; antennæ flavæ nigro annulatæ, clava obscura; thorax nigro varius; pedes rufi, tarsis nigro subannulatis; alæ hyalinæ, angustæ, venis stigmateque rufescentibus.

Ulula microcephala, *Ramb. Hist. Nat. Ins. Neur.* 359, 4.

a. St. Lucia. Presented by W. Muter, Esq.

55. Ascalaphus subvertens.

Testaceo-fuscus, fusco-hirtus; caput flavum, albo-hirtum; antennæ nigræ; prothorax albo-hirtus; abdomen testaceum, strigis obliquis lateralibus nigris, subtus piceum; pedes testacei, tarsis ferrugineis; alæ limpidæ, margine costali subfuscescentes, posticæ apice fusco maculatæ.

Testaceous brown, thickly clothed with brown hairs: head yellow, very thickly clothed with white hairs and with a few brown hairs; hind part with a brown spot on each side: lower division of the eyes more than half the length and breadth of the upper division: prothorax clothed with white hairs: abdomen testaceous, pitchy beneath, much shorter than the wings; second and third following segments with an oblique black streak on each side: legs testaceous, tarsi ferruginous: wings limpid, of moderate size; stigma white, comprising four veins; veins black, with the exception of those by the stigma; subcostal region hardly decreasing in breadth from the base to the stigma, slightly tinged with brown: hind-wings shorter and a little narrower than the fore-wings, having between the stigma and the tip a large brown spot which is darkest in front. Length of the body 9 lines; of the wings 24 lines.

a. Venezuela. From Mr. Dyson's collection.

56. Ascalaphus inhonestus.

Ferrugineus, nigro-hirtus; caput antice albo-hirtum, facie testacea; antennæ testaceæ, nigro annulatæ, clava nigra; abdomen lateribus nigro strigatis, subtus nigrum; pedes testacei; alæ limpidæ, sat breves, anticæ stigmate flavo, posticæ stigmate nigro, apicem versus fusco maculatæ.

Ferruginous, clothed with black hairs: head with a yellow circle about the eyes, thickly clothed with black hairs about the base of the antennæ and with white hairs in front; face testaceous: antennæ testaceous, very slender, a little shorter than the wings; borders of the joints and club black: abdomen shorter than the hind-wings; segments with black streaks on each side; underside black: legs testaceous: wings limpid, rather short; stigma pale yellow in the fore-wings, deep black in the hind-wings, comprising five or four veins which are not forked; breadth of the subcostal region decreasing, slightly in the fore-wings, distinctly in the hind-wings, from near the base to the stigma: hind-wings shorter and a little narrower than the fore-wings, with a large brown spot on the whole breadth behind the stigma, occupying only the disks of the areolets. Length of the body 11 lines; of the wings 24 lines.

a. Brazil. From Mr. Stevens' collection.

* * Alæ posticæ dilatatæ.

Subpalasca, p., *Lefebvre, Mag. Zool.* 1842.
Corduleceras, *Ramb. Hist. Nat. Ins. Neur.* 359.

Head and chest very hairy: labium slightly heart-shaped, very slender, with its side borders much folded inward, fringed with thick bristles, coarctate, united with the upper border, which declines within in the form of a hood; its upper extremity notched or excavated, its angles bearing a tuft of bristles, which are rather long, very thick, bent, almost like spines: last joint of the labial palpi longer than the preceding one; first and second joints of the maxillary palpi very short; third and fifth almost equal, longer than the fourth: maxillæ broad at the base where their bristles are the longest: antennæ rather long, shorter than the wings, their clubs compact and oblong: divisions of the eyes almost equal: abdomen almost bare: spurs of the hind-tibiæ as long as the first and second joints: wings broad, dilated (the hind-wings especially) hindward; reticulation rather close; transverse branch of the fifth vein forming with the basilar vein a narrow well-defined space, which has but one range of areolets, of which the first and second are often traversed by a veinlet. Male without appendages.

57. Ascalaphus Surinamensis.

Capite thoraceque rufo, hirsuto ; abdomine fusco ; alis aureis, stigmatibus fuscis, posticis basi subsinuatis, nubecula lata fusca.

Ascalaphus Surinamensis, *Fabr. Ent. Syst. Suppl.* 207, 4, 5.
Ascalaphus villosulus, *Pal.-Beauv. Ins. Afr. et Amer. Neur.* pl. 7, f. 4, 86.
Ascalaphus Brasiliensis, *Guér. Icon. du Règne Anim.* pl. 62.
Ascalaphus Alopecinus, *Burm. Handb. Ent.* ii. 1000, 5.

Ascalaphus vulpecula? *Burm Handb. Ent.* ii. 1001, 6. *Capite thoraceque rufo, hirsuto ; abdomine fusco ; alis aureis, stigmatibus infuscatis, posticis basi profunde sinuatis.*

Subpalasca Surinamensis, *Lefebvre, Mag. Zool.* 1842.
Cordulecerus Surinamensis, *Ramb. Hist. Nat. Ins. Neur.* 360.

a—*c*. Jamaica. From Mr. Gosse's collection.
d. ——— ? From Mr. Children's collection.

58. Ascalaphus subiratus.

Ater, nigro-pilosus ; antennæ fulvæ, nigro annulatæ, clava subtus testacea ; thorax testaceo vittatus ; abdomen breve ; pedes picei ; alæ limpidæ, anticæ apice subfuscescentes, posticæ basi nigro-fuscæ, fasciisque quatuor posticis obliquis abbreviatis fuscis.

Deep black, clothed with black hairs, which are very thick on the head between the antennæ and the face: antennæ tawny, slender, as long as the wings; tips of the joints black; club broad, black above, testaceous beneath: thorax with a broad testaceous stripe: abdomen not half the length of the wings: legs pitchy: wings limpid; stigma deep black; subcostal region decreasing in breadth, and especially so in the hind-wings, from near the base to the stigma; wings very slightly notched on the hind border at the tip of the cubitus: fore-wings very slightly tinged with brown at the tips, brown on one-fourth of the length from the base, with the exception of the disks of the areolets which are nearly limpid: hind-wings a little broader and much shorter than the fore-wings, deep brown along more than one-third of the length from the base, with a lurid tinge along the rest of the subcostal region, and with four short oblique brown bands extending from the disk to the hind

border, the fourth united in the disk to the third, and extending to the stigma; hind border dilated before one-third of the length, excavated towards the base near which there is a tuft of hairs. Length of the body 9 lines; of the wings 27 lines.

a. Honduras. From Mr. Dyson's collection.
b. Guatimala. From Mr. J. Deby's collection.

Subdiv. 2.

Alæ posticæ et nonnunquam anticæ margine postico inciso.

Orphne, *Lefebvre*, *Mag. Zool.* 1842.
Colobopterus, *Ramb. Hist. Nat. Ins. Neur.* 360.

Head small: third joint of the maxillary palpi almost as long as the last, longer than the others; second joint of labial palpi thicker at the tip; last joint more slender: labium somewhat heart-shaped, with its lateral borders broadly folded within, fringed with little short bristles which are very numerous and thick-set; upper border deeply declining and forming a large excavation whose angles bear a tuft of thick rather long bristles like spines: antennæ very slender, as long as the wings, with verticillate hairs at the base: legs slender, fringed with very long hairs; the two bristles as long as the claws between which they are placed: spurs of hind-tibiæ at least as long as the three first joints of the tarsi; wings long and narrow; hind-wings with a broad notch on the hind border near the base which is rather prominent.

59. Ascalaphus leptocerus.

Niger, flavo varius; caput parvum; antennæ longissimæ, flavæ, nigro annulatæ, basi verticillato-pilosæ, clava elongata subtus alba; pedes fusco-flavi; alæ hyalinæ, angustæ, venis rufis, stigmate fusco.

Colobopterus leptocerus, *Ramb. Hist. Nat. Ins. Neur.* 361, 4.

a. ———? From Mr. Birch's collection.
b. ———? From Mr. Children's collection.

Brazil?

60. Ascalaphus nematocerus.

Luteo-fuscus; abdominis segmentis bilineatis; antennis longissimis fuscis, clava pallida; alis hyalinis, stigmate fusco.

Colobopterus nematocerus, *Ramb. Hist. Nat. Ins. Neur.* 361, 2.
Ascalaphus macrocercus? *Burm. Handb. Ent.* ii. 1000, 3.
Subpalasca macrocercus, *Lefebvre, Mag. Zool.* 1842.

61. Ascalaphus garrulus.

Fuscus, rufo-hirtus; caput antice ferrugineum; antennæ nigræ, basi fulvæ, clava fusiformi subtus alba; pectus ferrugineum; abdomen rufum, gracile, nigro varium; pedes testacei; alæ luridæ, amplæ, apice subangulatæ, stigmate subfusco.

Brown, very thickly clothed with bright reddish hairs, which form a tuft in front of the head and are there mixed with some brown ones: head ferruginous towards the mouth: antennæ black, shorter than the wings, tawny towards the base; club fusiform, white beneath: thorax ferruginous beneath: abdomen red, slender, very much shorter than the wings; segments partly black on each side and towards the hind border: legs testaceous: wings lurid, ample, slightly angular at the tips, indistinctly undulating along the hind borders; stigma pale brown, very small, with two, three, or four veins; veins black; longitudinal veins testaceous; subcostal region slightly decreasing in breadth from near the base to the stigma: hind-wings shorter but not narrower than the fore-wings; hind border slightly dilated near the base, and more distinctly so before half the length. Length of the body 16 lines; of the wings 38 lines.

a. Brazil.
b. ———? From Mr. Children's collection.

62. Ascalaphus litigiosus.

Fuscus, rufo-hirtus; caput antice ferrugineum; antennæ nigræ, basi fulvæ, clava fulva fusiformi; thoracis latera et pectus fusco-hirta; abdomen nigrum, rufo bimaculatum; pedes testacei; alæ luridæ, amplæ, apice subangulatæ, posticæ basi fuscæ, margine postico valde convexo vix dilatato.

Female of *A. garrulus?* Brown, very thickly clothed with bright reddish hairs, which form a tuft in front of the head, and are there mixed with some brown hairs: head ferruginous towards the mouth: antennæ black, shorter than those of *A. garrulus*, much shorter than the wings, tawny towards the base; club fusiform, tawny: thorax clothed with brown hairs on each side and beneath: abdomen black, with two red dorsal spots, shorter than that of *A. garrulus*: legs testaceous: wings lurid, ample, slightly angular at the tips; stigma brown, very small; veins black; longitudinal veins testaceous; subcostal region decreasing in length from near the base to half the length of the wing, parallel from thence to the stigma: hind-wings shorter but not narrower than the fore-wings, dark brown on near one-third of the length from the base except towards the fore border, very convex but hardly dilated on the hind border at one-third of the length from the base. Length of the body 15 lines; of the wings 38 lines.

a. ———? From Mr. Children's collection.

63. Ascalaphus incusans.

Fuscus, fusco-hirtus; caput ferrugineum, subtus cano-hirtum; antennæ piceæ, longæ, basi ferrugineæ, clava nigra; thorax testaceo vittatus, subtus testaceo bifasciatus; abdomen nigro-piceum, subtus basi testaceo varium, apice dilatatum; pedes ferruginei; alæ subluridæ, margine postico basi excavato et in anticis dilatato acuminato.

Brown, clothed with brown hairs: head ferruginous, with some hoary hairs beneath: antennæ pitchy, long, ferruginous at the base, a little shorter than the wings; club black, broad: thorax with a testaceous dorsal stripe; under side with two testaceous oblique bands on each side: abdomen pitchy black, much shorter than the wings, partly testaceous towards the base beneath, dilated at the tip; appendages very short: legs ferruginous: wings with a slight lurid tinge; hind border with a long shallow excavation at the base; stigma dark brown, with five or six veins, one of which is forked; veins black; space between the subcostal and the radius lurid: fore-wings with the subcostal region very slightly increasing in breadth from the base to the stigma; hind border dilated into a long acute angle near the base: hind-wings shorter and narrower than the fore-wings; subcostal region slightly decreasing in breadth from near the base to half the length, parallel from thence to the stigma. Length of the body 12 lines; of the wings 30 lines.

a, Ceylon. Presented by Dr. Hooker.

64. Ascalaphus subripiens.

Fuscus, fusco-hirtus; caput ferrugineo flavoque varium, apud antennas nigro-hirtum, fronte nigro, antennæ piceæ, basi fulvæ et verticillato pilosæ, clava subtus basique testacea; thorax flavo varius, subtus flavo bivittatus; abdomen testaceo notatum; pedes ferruginei, femoribus flavis; alæ limpidæ, longæ, angustæ, margine postico basi excavato, in anticis quoque dilatato.

Deep brown, clothed with brown hairs: head with a tuft of black hairs near the base of the antennæ, yellow about the borders of the eyes, ferruginous with yellow spots behind; front black; face ferruginous: antennæ pitchy, slender, almost as long as the wings, tawny and verticillate-pilose towards the base; club narrow, subfusiform, testaceous at the base and beneath: thorax varied with yellow; under side with two broad yellow stripes: abdomen very much shorter than the wings, with testaceous marks along the whole length above and below: legs ferruginous; femora yellow: wings limpid, long and narrow; stigma black, veins black, yellow at the base; subcostal region slightly increasing in breadth from the base to the stigma: fore-wings slightly excavated at the base of the hind border: hind-wings shorter and narrower than the fore-wings; hind border dilated at the base, and thence excavated along more than one-third of the length. Length of the body 10 lines; of the wings 28 lines.

a. Venezuela. From Mr. Dyson's collection.

65. Ascalaphus impavidus.

Ferrugineo-fuscus, fusco-hirtus; caput ferrugineum, apud antennas nigro-hirtum, fronte atra; antennæ ferrugineæ, graciles, nigro annulatæ, alis longiores, clava apice subtus albida; abdomen nigrum; pedes ferruginei; alæ limpidæ, parvæ, margine postico basi excavato et dilatato.

Ferrugineous brown, thickly clothed with brown hairs: head ferruginous, with black hairs about the base of the antennæ; front deep black: antennæ ferruginous, slender, longer than the wings; tips of the joints black; club narrow, black, whitish towards the tip beneath: abdomen black, thinly clothed with short hairs, with a hoary tinge towards the base beneath, as long as the hind-wings:

legs ferruginous: wings limpid, rather short and narrow; stigma blackish, its veins generally simple; veins black; hind border ciliated with black hairs at the base: fore-wings with the subcostal region very slightly widening from the base to the stigma; hind border near the base with a long and very narrow dilatation between two shallow and broad excavations: hind-wings narrower (except in the dilated part) and shorter than the fore-wings; hind border deeply excavated by the base and as much dilated before one-third of the length; subcostal region very slightly decreasing in breadth from near the base to the stigma. Length of the body 12 lines; of the wings 24 lines.

a. Santarem, Brazil. From Mr. Stevens' collection.

66. ASCALAPHUS INTEMPESTIVUS.

Fuscus, fusco-hirtus; caput ferrugineum, antice nigrum; antennæ ferrugineæ, gracillimæ, basi pilosæ, clava nigra apice subtestacea; thorax ferrugineo vittatus; pectus cano-hirtum; abdomen nigro-cinereum; pedes ferruginei; alæ limpidæ, angustæ, margine postico in anticis anguste dilatato in posticis late excavato, stigmate fusco.

Dark brown, clothed with paler brown hairs: head ferruginous, very thickly clothed, black in front: antennæ ferruginous, very slender, hairy at the base, a little longer than the wings; club black, slightly testaceous towards the tip: thorax with a ferruginous stripe, with a hoary tinge and clothed with hoary hairs beneath; abdomen grayish black, slender, shorter than the hind-wings: legs ferruginous: wings limpid, narrow; stigma dark brown, rather small, with four veins: fore-wings with a slender, conical dilatation on the hind border near the base; subcostal region increasing in breadth from the base to the stigma: hind-wings much narrower and shorter than the fore-wings, with a long and very shallow excavation on the hind border towards the base; subcostal region slightly widening from the base to less than half the length, more slightly decreasing in breadth from thence to the stigma. Length of the body 11 lines; of the wings 25 lines.

a. Santarem, Brazil. From Mr. Stevens' collection.

67. ASCALAPHUS SEPULTUS.

Ferrugineus, supra fusco-hirtus, subtus cano-hirtus; caput antice nigro-hirtum, fronte nigro; antennæ nigræ, gracillimæ, clava lata subtus basi albida; abdomen piceum, testaceo varium, alis paullo brevius; pedes testacei, tarsis nigris; alæ limpidæ, parvæ, margine postico basi excavato, stigmate sublimpido.

Ferruginous, clothed with brown hairs above, with houry hairs beneath: head thickly clothed between the antennæ and the front with black hairs; front black: antennæ black, very slender, a little longer than the wings; club broad, whitish towards the base beneath: abdomen pitchy, a little shorter than the wings, with testaceous dorsal marks; underside testaceous: legs testaceous; tarsi black, testaceous at the base: wings limpid, rather short and narrow; stigma hardly coloured, its four veins generally simple; veins black: fore-wings with the subcostal region increasing in breadth for a short distance from the base and from thence parallel to the stigma; hind border with a short and rather deep excavation at the base: hind-wings much shorter and a little narrower than the fore-wings; subcostal region increasing in breadth for some space from the base, and thence slightly decreasing to the stigma; hind border with a broad excavation near the base. Length of the body 11 lines; of the wings 24 lines.

a. Brazil. From Mr. Stevens' collection.

Div. 2.

Oculi integri.

Ascalaphi Olophthalmi, *Lefebvre.*

Subdiv. 1.

Abdomen planum.

Sect. 1.

Alæ latæ, non incisæ nec appendiculatæ.

Byas, *Ramb. Hist. Nat. Ins. Neur.* 361.

Eyes not quite spherical: antennæ very short, hardly half the length of the wings; club oblong: spurs of hind-tibiæ hardly as long as the first joint of the tarsi: wings broad; reticulation very clear; fore-wings having the basilar branch of the fifth vein anastomosed with the transverse branch before the hind border, and forming a large areolet; the branch of the corresponding vein in the hind-wings has the like structure.

68. Ascalaphus microcerus.

Magnus, rufescens, fusco maculatus; antennæ flavæ, clava obscuriore; pedes flavi, tarsis nigricantibus; alæ latæ, hyalinæ, venis rufo-fuscis, stigmate flavescente lineis obscurioribus.

Byas microcerus, *Ramb. Hist. Nat. Ins. Neur.* 363.

West Indies.

Sect. 2.

Alæ basi incisæ et appendiculatæ.

Haploglenius, *Burm. Handb. Ent.* ii.
Ptynx et Amœa, *Lefebvre, Mag. Zool.* 1842.

69. Ascalaphus appendiculatus.

Fuscus; thoracis lateribus vittatis, ventre pedibusque testaceis; alarum omnium limbo antico fusco, anticarum basi subdentato.

Ascalaphus appendiculatus, *Fabr. Ent. Syst.* ii. 96, 4.
Ascalaphus costatus, *Winth.; Burm. Handb. Ent.* ii 1000, 1.

Ascalaphus subcostatus? *Burm. Handb. Ent.* ii. 1000, 2. *Fuscus, pallide maculatus; alarum omnium limbo antico infuscato, stigmatibus obscurioribus, anticarum basi integra.*

Haploglenius appendiculatus, *Ramb. Hist. Nat. Ins. Neur.* 363.

a. ———?

North America? Bahia, Brazil.

70. Ascalaphus obscurus.

Fusco-niger; oculis fuscis; antennis apice pallidis; thoracis dorso concolori obscuro; abdominis segmentis 2o et 3o strigis duabus obliquis velutino nigris; alis subparallelis subangustis hyalinis venis stigmateque nigricantibus; anticis versus basin marginis postici vix angulatis, margine ipso anguli parum incrassato, unguibus tarsorum longioribus curvatis. Long. alar. 27 lin.

Ascalaphus (Haplo genius) obscurus, *Westw. Cab. Orient. Ent.*

East Indies.

71. Ascalaphus remotus.

Piceus, fusco-hirtus; caput albido-hirtum, antice testaceum; oculi parvi; antennæ nigræ, articulis intus basi denticulatis, clava lata; thoracis discus flavescens; abdomen gracile, vitta dorsali rufa; alæ limpidæ, sublongæ, basi fuscæ, stigmate fusco magno.

Pitchy, clothed with brown hairs: head thickly clothed with whitish hairs, testaceous in front: eyes small: antennæ black, long, a little shorter than the wings; joints denticulate on the inner side near the base; club broad: disk of the thorax mostly yellow above and beneath: abdomen black, slender, much shorter than the wings, with a red dorsal stripe: wings limpid, rather long, dark brown at the base; stigma dark brown, large, with six veins; veins black; subcosta and radius ferruginous; subcostal region decreasing in breadth from near the base to the middle of the wing, whence it widens to tho stigma: hind-wings shorter and narrower than the fore-wings, and with less variation of breadth in the subcostal region. Length of the body 13 lines; of the wings 36 lines.

a. China. From Mr. Stevens' collection.

72. Ascalaphus injurius.

Testaceo-fuscus, fusco-hirtus; caput pilis canis et nigricantibus vestitum, antice testaceum testaceoque pilosum; antennæ nigræ, basi fulvæ, clava subtus testacea; pectus testaceum, nigro maculatum; abdomen testaceum, piceo maculatum; pedes testacei, tarsis nigris; alæ longæ, limpidæ.

Testaceous-brown, clothed with brown hairs: head clothed with blackish and hoary hairs, testaceous and clothed with testaceous hairs in front: antennæ black, tawny towards the base, very slender, very much shorter than the wings; club testaceous beneath: thorax testaceous beneath with black spots: abdomen testaceous with some pitchy marks: legs testaceous; tarsi black: wings limpid, long; stigma brown, comprising four veins which generally are all forked; veins black; subcostal region almost equal in breadth from the base to the stigma: hind-wings shorter but not narrower than the fore-wings; hind border slightly convex towards the base. Length of the wings 40 lines.

a. Brazil.

73. Ascalaphus iniquus.

Fuscus, fusco nigroque hirtus; caput antice albido-testaceum, fulvo-pilosum; antennæ nigræ; pectus flavum, albo-hirtum, piceo notatum; abdomen gracillimum, supra ferrugineum nigro guttatum, subtus testaceum, apice piceum; pedes flavi, piceo strigati, tarsis piceis; alæ limpidæ, posticæ basi anticis latiores.

Brown, clothed with black and brown hairs: head whitish testaceous and clothed with tawny hairs in front: antennæ black, very slender, much shorter than the wings: thorax beneath pale yellow with some pitchy marks, thinly clothed with white hairs: abdomen very slender, as long as the hind-wings, ferruginous with two or three black dots on each side above, testaceous beneath, pitchy towards the tip: legs yellow, with pitchy streaks; tarsi pitchy: wings limpid; stigma dark brown, comprising four veins; subcostal region slightly, and in the fore-wings almost imperceptibly, decreasing in breadth from near the base to the stigma: hind-wings much shorter than the fore-wings, but towards the base much broader and with a very convex hind border. Length of the body 17 lines; of the wings 34 lines.

a. Brazil. From Mr. Stevens' collection.

74. Ascalaphus impediens.

Fuscus, fusco-hirtus; caput anticum maris testaceum, fœminæ ferrugineum; antennæ nigræ; thorax fascia antica vittisque duabus testaceis; pectus albido-testaceo bivittatum; abdomen testaceo vittatum; pedes picei, femoribus tibiisque testaceo vittatis; alæ limpidæ, basi fuscæ, stigmate maris sublimpido, fœminæ subfusco.

Brown, clothed with brown hairs: head of the female with black hairs about the base of the antennæ; front and face of the male testaceous, of the female ferruginous: antennæ black, very slender, much longer in the male than in the female, much shorter than the wings: thorax with a testaceous stripe along each side and a testaceous band in front; underside with two broad whitish testaceous stripes: abdomen long, much shorter than the wings, shorter in the male than in the female, with a testaceous dorsal stripe along more than half the length and with some testaceous streaks on each side: legs pitchy; femora and tibiæ with testaceous stripes: wings limpid, brown at the base; stigma hardly coloured in the male, pale brown in the female, comprising four veins; veins black; subcostal region decreasing in breadth on the hind-wings, but hardly so on the fore-wings, from near the base to the stigma: hind-wings much shorter but not narrower than the fore-wings; their greatest breadth at one-third of the length from the base, where the fore border is most convex. Length of the body 12½—13½ lines; of the wings 33 lines.

a. Pará. From Mr. Stevens' collection.
b. Santarem, Brazil. From Mr. Stevens' collection.

75. Ascalaphus damnosus.

Fuscus, albido-hirtus; caput testaceum, subtus flavum, apud antennas nigro-hirtum, vertice piceo; antennæ nigræ; thorax flavo varius; abdomen nigrum, subtus testaceo vittatum; pedes testacei, tibiis supra fuscis, tarsis nigris; alæ hyalinæ, longæ, latæ, apice fuscæ.

Brown, clothed with whitish hairs: head testaceous, yellow beneath: vertex pitchy; a tuft of black hairs about the base of the antennæ: antennæ black, slender, very much shorter than the wings: segments of the thorax with yellow marks and borders: abdomen

black, slender, with a testaceous stripe beneath, much shorter than the wings: legs testaceous; tibiæ brown above; tarsi black: wings hyaline, long, broad, dark brown at the base; stigma small, very pale brown, comprising four veins, of which three are forked; veins black; subcostal region with a lurid tinge, slightly, and in the fore-wings almost imperceptibly, decreasing in breadth from near the base to the stigma: hind-wings shorter than the fore-wings, but broader near the base, where the hind border is very convex. Length of the body 15 lines; of the wings 34 lines.

a. ——— ?

76. Ascalaphus arenosus.

Fuscus, fusco-hirtus; caput apud antennas nigro-hirtum, facie ferruginea; antennæ nigræ, clava subtus albido-testacea; thorax disco dorsali pectorisque vittis duabus albido-testaceis; pedes testacei, tarsis nigris; alæ limpidæ, breviusculæ.

Brown, clothed with brown hairs: head clothed with black hairs about the base of the antennæ; face ferruginous: antennæ black, very slender, much shorter than the wings; club whitish testaceous beneath; disk of the thorax whitish testaceous; underside with two broad whitish testaceous stripes by the wings: abdomen a little longer than the hind-wings, clothed on each side with whitish down, whitish testaceous above along more than half the length from the base: legs testaceous; tarsi black: wings limpid, rather short; stigma pale brown, comprising five veins, of which two or three are forked; veins black; subcostal region slightly, and especially so in the fore-wings, decreasing in breadth from near the base to the stigma: hind-wings much shorter but not narrower than the fore-wings; their greatest breadth at one-fourth of the length from the base, where the hind border is most convex. Length of the body 15 lines; of the wings 27 lines.

a. Brazil. From Mr. Stevens' collection.

77. Ascalaphus luteus.

Fuscus, fusco-hirtus; caput apud antennas nigro-hirtum, facie testacea; antennæ piceæ, testaceo annulatæ, clava nigra subtus testacea; abdomen nigrum, subtus basi testaceum; pedes testacei, tarsis nigris; alæ longæ, limpidæ, basi fuscæ, stigmate flavo.

Brown, clothed with brown hairs: head thickly clothed about the base of the antennæ with black hairs; face testaceous: antennæ pitchy, very slender, much shorter than the wings; club black, underside and the borders of the joints testaceous; abdomen black, very much shorter than the hind-wings; underside pitchy, testaceous towards the base: legs testaceous; tarsi black: wings limpid, very long, brown at the base; stigma very pale yellow, comprising four yellow veins which generally are all forked; veins black; subcostal region of equal breadth from near the base to the stigma, but with its breadth slightly decreasing in the hind-wings; the latter much shorter but not narrower than the fore-wings, their greatest breadth at one-third of the length where the hind border is convex. Length of the body 15 lines; of the wings 46 lines.

a. ———?

78. Ascalaphus circumflexus.

Fuscus, fusco-hirtus; caput apud antennas nigro-hirtum, facie testaceo-fusca; antennæ ferrugineæ, testaceo annulatæ, clava nigra subtus testacea; abdomen piceum; pedes testacei, tarsis nigris; alæ longæ, limpidæ, apice subangulatæ, posticæ apice fuscæ.

Brown, clothed with brown hairs: head thickly clothed with black hairs about the base of the antennæ: face testaceous brown: antennæ ferruginous, very slender, much shorter than the wings; joints from about one-third of the length to the club testaceous at the base; club black, testaceous beneath, rather narrow: abdomen pitchy, much shorter than the hind-wings: legs testaceous; tarsi black: wings limpid, long, indistinctly angular at the tips, these with a brown tinge, which is indistinct on the fore-wings, but much darker and broader on the hind-wings; stigma yellowish, comprising five or six veins which are nearly all forked; veins black; subcostal region of the fore-wings brown, slightly increasing in breadth from the base to the stigma, near which there is a forked vein: hind-wings much shorter, but very little narrower than the fore-wings, their greatest breadth at one-third of the length from the base; subcostal region slightly tinged with brown towards the stigma, very slightly decreasing in breadth from near the base to near the stigma. Length of the body 16 lines; of the wings 46 lines.

d. Santarem, Brazil. From Mr. Stevens' collection.

79. Ascalaphus contrarius.

Piceus, gracilis, fusco-hirtus; caput apud antennas nigro-hirtum, facie flava; antennæ ferrugineæ, clava nigra subtus albida; thorax maculis duabus fasciaque antica flavis; pectus flavo bifasciatum; abdomen gracile, flavo guttatum et strigatum et apice maculatum; pedes fulvi, subtus testacei, tarsis nigris apice ferrugineis; alæ limpidæ, longissimæ, apice fuscæ, stigmate albido, anticæ ad costam fuscæ.

Pitchy, slender, clothed with brown hairs: head with black hairs about the base of the antennæ; face yellow: antennæ ferruginous, much shorter than the wings; club black, whitish beneath: thorax with a yellow spot on each shoulder and a yellow band in front; underside with two oblique yellow bands on each side: abdomen slender, much shorter than the wings, with some yellow dots and oblique streaks on each side, and with a yellow spot at the tip: legs tawny, testaceous beneath; tarsi black, with ferruginous tips: wings limpid, very long; tips brown, especially in the hind-wings; stigma whitish, with whitish veins; veins black: fore-wings with the subcostal region brown, very slightly widening from the base to the stigma: hind-wings much shorter but not narrower than the fore-wings; subcostal region slightly decreasing in breadth from near the base to near the stigma, where it again slightly widens. Length of the body 17 lines; of the wings 52 lines.

a. Pará. From Mr. Stevens' collection.

80. Ascalaphus albistigma.

Ferrugineus, fusco-hirtus; antennæ fulvæ, breves, clava nigra subtus testacea; pectus vittis duabus notisque discalibus testaceis; abdomen piceum, subtus basi testaceum; pedes ferruginei, tibiis testaceis, tarsis nigris; alæ subluridæ, longæ, sat latæ, stigmate albo, anticæ ad costam fuscæ.

Ferruginous, clothed with brown hairs: antennæ tawny, short, less than half the length of the wings; club black, testaceous beneath: thorax beneath with a broad testaceous stripe on each side and some testaceous marks in the disk: abdomen pitchy, testaceous beneath at the base: legs ferruginous; tibiæ testaceous; tarsi black: wings with a very slight lurid tinge, long, rather broad, pale brown for full one-fourth of the length from the tips; stigma white, large,

with white veins; veins black: fore-wings with the subcostal and radial regions dark brown, the former slightly decreasing in breadth from near the base to the stigma; middle of the wing parallel from thence to the stigma, its veins clouded with darker brown except near the base where the areolets are partly limpid about their fore borders: hind-wings shorter and a little narrower than the fore-wings; subcostal region decreasing much in breadth from near the base to the middle, whence it very slightly widens to the stigma. Length of the body 16? lines; of the wings 40 lines.

a. Honduras. From Mr. Dyson's collection.

Group ——— ?

81. ASCALAPHUS CHLOROPS.

Testaceo-fuscus, pilosus; thorace maculis seu vittis obscurioribus; oculis nitidis pallide aureo-viridibus; alis vitreis, venis fuscis; pedibus pallidis, genubus, tibiarum apice tarsisque piceis.

Ascalaphus chlorops, *Blanch. Orbigny, Voy. Amér. Mérid.* 218, 754, pl. 28, f. 8.

Santa Cruz, Bolivia.

Genus 3. STILBOPTERYX.

Caput transversum, pronum, cum oculis prothorace latius. Antennæ capite duplo longiores, multi-articulatæ, capitatæ. Os sub pectore inclinatum. Labrum transversum, lateribus rotundatis, medio submarginatum. Mandibulæ validæ, incurvæ, apice acutæ, intus dentibus duobus distantibus armatæ. Maxillarum lacinia apice vix acuta, intus pilosa, basi unguiculo elevato instructa; galea fere linearis, lacinia paullo longior, apice trifida. Palpi maxillares galea paullo longiores, 4-articulati; articuli longitudine subæquales. Labium subquadratum, valde pilosum. Palpi labiales ligula paullo longiores, 3-articulati, articulis cylindricis, longitudine subæqualibus. Ligula rotundata, apice emarginata, dente mediano obtuso. Prothorax brevis, capite metathoraceque angustior. Abdomen elongatum, lineare. Alæ lineares, haud abdomen sedentis superinjicientes. Tarsi 5-articulati.

Stilbopteryx, *Newman, Ent. Mag.* v. 399.
Azesia, *Lefebvre, Guér. Mag. Zool.* 1842.

1. STILBOPTERYX COSTALIS.

Fusca; alæ nitidæ, hyalinæ, costis apicibusque late fuscis; qualibet ala macula costali alba ante apicem instructa.

Stilbopteryx costalis, *Newm. Ent. Mag.* v. 400.
Azesia Napoleo, *Lefebvre, Guér. Mag. Zool.* 1842; *Ins.* pl. 92. *Ramb. Hist. Nat. Ins. Neur.* 364.

a. Australia. Presented by the Haslar Hospital.
b. Australia. Presented by the Entomological Club.
c. Australia. From Mr. Strange's collection.

Fam. 3. PANORPIDES.

Os in rostrum plus minusve productum. Mandibulæ elongato-trigonæ, dentibus nullis. Maxillæ corneæ, apice elongatæ, bifidæ, lobo interno longiori, lanceolato, piloso, externo subulato, biarticulato. Palpi maxillares maxillis parum breviores, quinquearticulati, articulis cylindricis, apicis brevioribus. Mentum elongatum, corneum, apice emarginatum. Ligula submembranacea, porrecta, lanceolata, pilosa. Palpi labiales ligula longiores, triarticulati, articulis cylindricis, ultimo reliquis parum breviore. Alæ quatuor similes aut nullæ.

Panorpides, *Ramb. Hist. Nat. Ins. Neur.* 326.
Panorpidæ, *Leach; Westw.*
Rhaphioptera et Panorpina, *MacLeay.*
Boreidæ et Panorpidæ, *Steph.; Newman.*
Panorpa, *Linn.; Fabr.; Gmel.; Coqueb.; Oliv.; Panz.*
Gryllus, p., *Panz.*
Panorpatæ, *Latr.; Klug, Abhandl. Königl. Akad. Wiss. Berl.* 1836, 81.
Panorpites et Boreites, *Blanchard.*

Genus 1. CHORISTA.

Chorista, *Klug, Abh. Königl. Akad. Wiss. Berl.* 1836, 87.

Os in rostrum haud productum. Mandibulæ lineares, corneæ, apice incurvæ acuminatæ. Maxillæ elongatæ, basi corneæ, apice membranaceæ, bifidæ, lobis subæqualibus, apice villosis, externo lineari, interno cylindrico, sublongiore. Palpi maxillares maxillis longiores, 5-articulati, articulis subæqualibus, cylindricis, subhir-

sutis, 4o 5o que subacuminato reliquis tenuioribus. Mentum breve, subquadratum, corneum, apice truncatum. Labium mento, cui insidet, fere longior, membranaceum, profunde et acute emarginatum. Palpi labiales labio, cujus apici affixi, fere longiores, biarticulati, articulis subhirtis, 1o ovato, crassiori, 2o lineari illo parum minori.

1. Chorista australis.

Fusca; capite femoribusque rufo-testaceis; alis flavescenti-hyalinis, fusco venosis.

Chorista australis, *Klug, Abh. Akad. Wiss. Berl.* 1836, 101, pl. f. 8.

a. New Holland.

Genus 2. BOREUS.

Os in rostrum productum. Ocelli nulli. Mandibulæ compressæ, lineares, subcorneæ, apice subincurvæ, intus ante apicem denticulatæ. Maxillæ basi cum mento connatæ, lineares, coriaceæ, dein membranaceæ, apice ovatæ, integræ, margine subtilissime denticulato. Palpi maxillares maxillis longiores, 5-articulati, articulis cylindricis subæqualibus, ultimo reliquis longiori, elongato. Mentum cum maxillis connatum, antice sinuatum. Labium mento insidens, obconicum, apice paullo ampliatum, rotundatum, integrum. Palpi labiales brevissimi, biarticulati, articulo 1o quadrato, 2o 1o vix longiore, cylindrico.

Boreus, *Cuvier, Règne Anim.* v. 247; *Latr.; Guérin; Curtis; Steph.*
Panorpa, p., *Linn.; Fabr.; De Vill.; Oliv.; Turt.; Klug; Ramb.*
Gryllus, p., *Panzer.*
Bittacus, p., *Latr. Hist. Nat. Ins.*

1. Boreus hyemalis.

Æneo-viridis; antennæ nigricantes; oviductus et pedes pallidi.

Panorpa hyemalis, *Linn. Syst. Nat.* i. 2, 914, 3. *Fabr. Syst. Ent.* 314, 3; *Ent. Syst. Emend.* ii. 98, 5. *Vill. Ent. Linn.* iii. 65, 3. *Oliv. Enc. Méth.* viii. 715, 7. *Turt. Syst. Nat.* iii. 406.
Gryllus proboscideus, *Panz. Faun. Ins. Germ.* xxii. 18.

Bittacus hyemalis, *Latr. Hist. Nat. Ins.* xiii. 20, 3.
Boreus hyemalis, *Latr. Cuv. Règne Anim.* v. 247. *Guér. Icon. Règne Anim.* pl. 61, f. 4. *Guér. et Perch. Gen. Ins.* 1, *Neuropt.* pl. 1. *Curt. Brit. Ent.* iii. pl. 118. *Steph. Ill. Brit. Ent. Mand.* vi, 51, 1. *Burm. Handb. Ent.* ii. 955. *Ramb. Hist. Nat. Ins. Neur.* 328. *Crochard, ed. Cuv. Règn. Anim.* 95, pl. 102, f. 5.

a. England.
b. ——— ? Presented by E. Doubleday, Esq.
c—f. ——— ? From Mr. Children's collection.

2. Boreus nivoriundus.

Niger vel nigro-fuscus, nitens; thoracis dorso pedibusque fulvis; rostro et oviductu fulvis apice fuscis.

Boreus nivoriundus, *Fitch, Winter Insects of New York* (May, 1847), 4, 1. *Trans. Ent. Soc. Lond. new series*, i. 96, 1.

a—d. New York. Presented by Dr. Fitch.

3. Boreus brumalis.

Nigro-viridis; rostro, oviductu, antennis pedibusque nigris.

Boreus brumalis, *Fitch, Winter Insects of New York* (May, 1847), 5, 2. *Trans. Ent. Soc. Lond. new series*, i. 96, 2.

a, b. New York. Presented by Dr. Fitch.

Genus 3. PANORPA.

Os in rostrum productum. Ocelli tres. Mandibulæ lineares, corneæ, apice incurvæ, acute trideñtatæ, dente externo majori, interno minimo. Maxillæ basi cum mento in tubum connatæ, lineares, corneæ, apice liberæ, membranaceæ, bifidæ, laciniis linearibus, subæqualibus, marginibus apiceque villosis. Palpi maxillares maxillis pone medium inserti, his fere longiores, 5-articulati, articulis 1o 2o que cylindricis subæqualibus, 3o 4o que subcompressis sublatioribus, 5o ovato obtuso. Mentum subquadratum, corneum, apice truncatum. Labium elongatum, membranaceum, acute emarginatum. Palpi labiales labio vix longiores, biarticulati, articulis membranaceis, subcompressis, 1o 2o parum longiore. Ungues biunguiculati.

Panorpa, *Linn.; Fabr.; Barbut; Gmel.; Berk.; Panz.; Stew.; Don.; Turt.; Shaw; Leach; Wood; Steph.; Klug; Curt.; Westw.; Ramb.*

1. PANORPA COMMUNIS.

Fusca; abdominis apice maculisque rufis; alis hyalinis, venis fasciis maculisque nigris.

——— *Aldrovand. de Animal. Ins.* 386, f. 8, 9, 387, f. 5, 6. *Mouf. Ins. Theatr.* 62.

Panorpa communis, *Linn. Syst. Nat. ed.* 12, i. 2, 915, 2; *Faun. Suec.* 384, 1516. *Poda, Ins. Mus. Græc.* 100, 1. *Müll. Faun. Ins. Fridrichsdal;* 66, 581. *Fabr. Syst. Ent.* 313, 1; *Ent. Syst. emend.* ii. 97, 1. *Barbut, Gen.* 226, pl. 12. *Berk. Syn.* 1, 152. *Stew. Elem. Nat. Hist.* ii. 218. *Scop. Ent. Carn.* 271, 110. *Deg. Ins.* ii. 2, 733, pl. 22, 24, 25, f. 1—3, 5. *Schr. Ins. Austr.* 316, 633; *Faun. Boic.* ii. 206, 1960. *Fourcr. Ent. Par.* ii. 360, 1. *Vill. Ent. Linn.* iii. 64, 1. *Panz. Faun. Ins. Germ.* 4, 10. *Geoffr. Ins.* ii. 260, 1, pl. 14, f, 2. *Schæff. Elem. Entom.* pl. 93; *Icon.* pl. 88. f. 6, 7. *Sulz. Ins.* 177, pl. 25, f. 6, 7. *Roem. Gen. Ins.* 56, pl. 25, f. 5, 6. *Frisch. Ins.* ix. 28, pl. 14. *Reaum. Ins.* iv. 157, pl. 8, f. 9, 10. *Latr. Hist. Nat. Ins.* xiii. 19, pl. 98, f. 2; *Gen. Cr. et Ins.* iii. 188, 1. *Cuv. Règne Anim.* v. 247. *Lam. Hist. Nat. Anim. Invert.* iv. 420, 1. *Oliv. Enc. Méth.* viii. 714, 1, pl. 97. *Turt. Syst. Nat.* iii. 406. *Leach, Zool. Misc.* ii. 28, pl. 94, f. 1. *Duméril, Dict. Sci. Nat.* pl. *Zool. Ent. Neuropt.* 27, f. 6. *Sam. Ent. Comp.* 260, pl. 7, f. 5. *Donov. Nat. Hist. Brit. Ins.* vi. pl. 20, f. inf. *Shaw, Gen. Zool.* vi. 264, pl. 86, f. med. *Steph. Ill. Brit. Ent. Mand.* vi. 52, 1. *Wood, Ill. Linn. Gen. Ins.* ii. 35, pl. 51. *Klug, Abh. Akad. Wiss. Berl.* 1836, 102, 1. *Ramb. Hist. Nat. Ins. Neur.* 328, 1. *Westw. Trans. Ent. Soc. Lond.* vi. 185, 1. *Fusco-nigra, meso- et metathorace linea media lata lutea, abdominis apice rufo; alis ad apicem subacutis, hyalinis, venis fasciis maculisque nigris, stigmate elongato; vena 1a longitudinali, pone stigma, ter furcata.*

Var. Panorpa affinis, *Leach, Zool. Misc.* ii. 98, pl. 94, f. 2. *Steph Ill. Brit. Ent. Mand.* vi. 52, 2.

P. Germanica, *Turt. Syst. Nat.* iii. 406. *Sam. Ent. Cab.* i. 3, 4.

P. communis, *Donov. Nat. Hist. Brit. Ins.* vi. pl. 201, f. sup. *Shaw, Gen. Zool.* vi. pl. 86, f. sup. et inf.

Var. Panorpa apicalis, *Steph. Ill. Brit. Ent. Mand.* vi. 52, 3.

Var. Panorpa borealis, *Steph. Ill. Brit. Ent. Mand.* vi. 53, 4.
Var.? Panorpa meridionalis, *Ramb. Hist. Nat. Ins. Neur.* 329, 2.

"Wings more spotted with black than those of *P. communis* and *P. Germanica*, from which the male also differs in the form of the underside of the abdomen, whose fifth segment instead of being tapering at the tip and cylindrical as in those species has a pointed elevation; the sixth segment is much more attenuated at the base and more thickened at the tip than in the other two species: teeth of the claws shorter than those of *P. communis*."—*Rambur.*

France; Spain.

a—b. England. Presented by J. C. Dale, Esq.
c—r. England.
s, t. South France. Presented by F. Walker, Esq.
v. Louvain. Presented by Lady Seymour.
u, w. S. France.
x—c c. Nice. From Dr. Leach's collection.
e e—j j. ———? From Mr. Children's collection.
kk—n n. ———?

2. Panorpa Germanica.

Fusco-nigra; meso-et metathorace linea media lutea; abdominis apice rufo-luteo; alis ad apicem rotundatis hyalinis, venis fasciis maculisque nigris, stigmate breviori; vena 1a pone stigma bis furcata.

Panorpa Germanica, *Linn. Syst. Nat.* i. 2, 915, 2. *Act. Nidros,* iii. 414, pl. 6, f. 10. *Schrift. Dronth. Ges. a. d. Dan. Ubers.* iii. 372, pl. 6, f. 10. *Fabr. Syst. Ent.* 313, 2; *Ent. Syst. Emend.* ii. 97, 2. *Schr. Ins. Austr.* 316, 634. *Vill. Ent. Linn.* iii. 65, 2. *Oliv. Enc. Méth.* vii. 714, 2. *Steph. Ill. Brit. Ent. Mand.* vi. 53, 5. *Westw. Trans. Ent. Soc. Lond.* iv. 185, 2. *Ramb. Hist. Nat. Ins. Neur.* 329, 3.

"Especially distinguished from *P. communis* by the form of the different segments of the abdomen, and of the clavate tip whose forceps have perceptibly shorter branches and joints, and whose two appendages, which are applied above on parting from the base, when it is raised, are dilated at the tip, and shorter, whilst in *P. communis* they are linear, and approach much nearer to the base of the forceps; the second segment presents above on its hind border an elevated projection, which rests on a little eminence of the following segment; claws with only three teeth."—*Rambur.*

Var. Panorpa apicalis, *Steph. Ill. Brit. Ent. Mand.* vi. 52, 3. *Nigra; alis hyalinis, immaculatis, apice fusco solo excepto, venis fuscescentibus, pebibus piceis.*

Var. Panorpa borealis, *Steph. Ill. Brit. Ent. Mand.* vi. 53, 4. *Nigra; rostro abdominis apice pedibusque piceis; alis hyalinis, venis maculaque costali fuscescentibus.*

Var.? Panorpa alpina, *Ramb. Hist. Nat. Ins. Neur.* 330, 4.

"A little smaller than *P. Germanica*, which it much resembles: second abdominal segment hardly gibbous on its hind border above, not perceptibly prolonged; fifth truncate-conical, very slightly gibbose on its border above, which is not so in *P. Germanica*: legs reddish; ungues with only two distinct teeth, whereas there are three in *P. Germanica*, and the point is longer than in the latter species: wings narrow, slightly reddish, with two or three scarcely perceptibly brown dots, without spots at the tips."—*Rambur.*

Chamounix.

Var. Panorpa cognata, *Ramb. Hist. Nat. Ins. Neur.* 330, 5.

"*Male.* Size of *P. Germanica*, which it much resembles, and has almost the same colours, but is quite distinct: hind border of the second abdominal segment a little raised; fifth short, thicker at its tip than at its base, compressed and prominent above at its tip; sixth gibbous at its base, hardly dilated at its tip; seventh a little gibbous after the base, not dilated towards the tip, much notched above on its hind border: terminal clavate part thicker than that of *P. communis*, and with more linear appendages, which extend almost to the base of the forceps."—*Rambur.*

Var.? Panorpa rufescens, *Ramb. Hist. Nat. Ins. Neur.* 330, 6.

N. America.

a, *b*. England.

? *c*, *d*? La Chine, near Montreal. Presented by Dr. Barnston.

This may be a variety of *P. communis*.

3. PANORPA RUFOSTIGMA.

Fulva ; thorace luteo, lateribus nigris ; alis hyalinis, fusco maculatis apiceque fusco, stigmate magno rufo ; vena 1a longitudinali, post stigma, bis furcata.

Panorpa rufostigma, *Westw. Trans. Ent. Soc. Lond.* iv. 186, 3.

Albania.

4. PANORPA APPENDICULATA.

Nigra ; capite thoraceque fulvis ; abdominis segmento 2o in ♂ appendiculo tenui valde elongato ; alis nigris, albo variis.

Panorpa appendiculata, *Westw. Trans. Ent. Soc. Lond.* iv. 186, 4.

a, *b*. Madras. Presented by Walter Elliot, Esq.
Var.? *c*. East Indies. From Mr. Sowerby's collection.
d. ——— ?

5. PANORPA JAVANICA.

Nigra ; thoracis abdominisque lateribus rufescentibus ; alis sublatis hyalinis, fascia parva, postice dilatata, ante medium alæ, fascia altera lata, postice furcata pone medium, apiceque lato nigris.

Panorpa Javanica, *Westw. Trans. Ent. Soc. Lond.* iv. 186, 5.

Java.

6. PANORPA ANGUSTIPENNIS.

Nigra ; rostro rufo, lobis lateralibus thoracis luteis ; alis valde elongatis, basi angustis, fascia tenuissima ante medium alteraque versus apicem postice furcata, apice lato, postice abbreviato, nigro.

Panorpa angustipennis, *Westw. Trans. Ent. Soc. Lond.* iv. 187, 6.

Var.? *a*. Java. From Mr. Argent's collection.

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7. Panorpa furcata.

Testacea; alis flavescentibus, punctis 4 ante medium, fascia lata postice furcata apiceque lato nigris; abdominis in maribus segmento 5o furca cornea armato, 6o et 7o valde elongatis.

Panorpa furcata, *Hardwicke, Linn. Trans.* xiv. pl. 5, f. 2—6. *Westw. Trans. Ent. Soc. Lond.* iv. 187, 7.

a, b. Nepaul. From the Hardwicke bequest.

8. Panorpa Charpentieri.

Capite abdomineque fuscis, thorace cum pedibus testaceo, dorso infuscato; alis hyalinis, puncto singulo fusco in areola una media.

Panorpa Charpentieri, *Burm. Handb. Ent.* ii. 2, 958. *Westw. Trans. Ent. Soc. Lond.* iv. 187, 8.

East Indies.

9. Panorpa Japonica.

Nigra; pedibus testaceis; alis hyalinis, fasciis duabus maculisque atris.

Panorpa Japonica, *Thunb. Nov. Ins. Sp. Diss.* 3, 67, f. 9. *Oliv. Enc. Méth.* viii. 715. *Klug, Mon. Panorp. Trans. Berl. Acad.* 1836, 26. *Burm. Handb. Ent.* ii. 2, 957. *Westw. Trans. Ent. Soc. Lond.* iv. 188, 9.

Japan.

10. Panorpa rufa.

Rufo-testacea; antennis fuscis, basi rufescentibus, regione ocellorum nigra; alis elongatis, apice subacutis, hyalinis; maculis 2 basalibus, fascia obliqua ante medium, macula media costali, fascia pone medium postice furcata apiceque nigris, punctis nonnullis hyalinis in apice nigro; abdomine ♂ elongato, segmento 5o supra inermi.

Panorpa rufa, *G. R. Gray, Anim, Kingd. Ins.* pl. 105, f. 2. *Westw. Trans. Ent. Soc. Lond.* v. 188, 10.
P. fasciata, *Klug, Mon. Panorp. Trans. Berl. Acad.* 1836, 25.
a, b. Georgia. From Mr. Abbot's collection.

11. PANORPA LUGUBRIS

Nigra; abdomine ferrugineo, apice nigro, segmento 5o ♂ inermi; alis nigris albo maculatis.

Panorpa lugubris, *Swederus, Suec. Trans.* 1787, 279. *Klug, Mon. Panorp. Trans. Berl. Acad.* 1836, 20. *Westw. Trans. Ent. Soc. Lond.* iv. 188, 11.
P. Scorpio, *Fabr. Ent. Syst. emend.* ii. 97, 3. *Oliv. Enc. Méth.* viii. 715. *Leach, Zool. Misc.* 11, 90, pl. 94, f. 3, 4. *Burm. Handb. Ent.* ii. 2, 927, 1. *Ramb. Hist. Nat. Ins. Neur.* 331, 8.
Bittacus Scorpio, *Latr. Gen. Crust. et Ins.* iii. 189.
a—d. North America.

12. PANORPA NEBULOSA.

Obscure luteo-fulva; abdominis segmento 5o maris inermi; alis subcinereo-hyalinis, puncto magno nigro ad basin stigmatis, venisque brevibus transversis nebulosis.

Panorpa nebulosa, *Westw. Trans. Ent. Soc. Lond.* iv. 188, 12.
a. Trenton Falls, New York. Presented by E. Doubleday, Esq.

13. PANORPA PUNCTATA.

Testacea; thoracis maculis, abdominisque basi fuscis; alis hyalinis, venis punctoque in singula areola nigris.

Panorpa punctata, *Klug, Mon. Panorp. Trans. Berl. Acad.* 1836, 25, pl. *ann.* f. 57. *Westw. Trans. Ent. Soc. Lond.* iv. 189, 13.
Mexico.

14. Panorpa terminata.

Testacea ; capite thoraceque fusco maculatis ; alis hyalinis, apice nigricantibus.

Panorpa terminata, *Klug, Mon. Panorp. Trans. Berl. Acad.* 1836, 26, pl. *ann.* f. 10 ♂ *Westw. Trans. Ent. Soc. Lond.* iv. 189, 14.

Mexico.

15. Panorpa Americana.

Testacea ; alis latis flavescentibus, fasciis 3 *fuscis* (2*a recta, ultima apicali*), *anticis ante fasciam* 1*am, et inter fascias* 1*am et* 2*am puncto parvo fusco ; venis fulvis, in partibus fasciatis fuscis ; abdominis segmento* 5*o in* ♂ *cornu brevi erecto armato.*

Panorpa Americana, *Swederus, Act. Holm.* 1787. *Westw. Trans. Ent. Soc. Lond.* iv. 189, 15.

P. fasciata, *Fabr. Ent. Syst.* ii. 98, 4. *Klug, Mon. Panorp. Trans. Berl. Acad.* 1836, 252. *Ramb. Hist. Nat. Ins. Neur.* 331, 7, pl. 8, f. 5.

Georgia.

16. Panorpa venosa.

Obscure fulva ; meso- et metathoracis lateribus obscuris ; abomine obscuro, linea dorsali pallidiori ; alis pallide flavo-luteis, venis transversis fasciis apiceque nigricantibus.

Panorpa venosa, *Westw. Trans. Ent. Soc. Lond.* iv. 190, 16.

a, *b*. Georgia. From Mr. Abbot's collection.

17. Panorpa confusa.

Fulva ; alis luteo-hyalinis, venis nigricantibus, transversis fusco-tinctis, fasciis apiceque tenuibus nigricantibus ; abdominis segmento 5*o maris supra spina longa armato,* 6*o ad basim haud inciso.*

Panorpa confusa, *Westw. Trans. Ent. Soc. Lond.* iv. 190, 17.

Massachusetts.

18. Panorpa debilis.

Luteo-fulva ; abdominis basi supra nigro, segmento 5o cornu brevi obliquo armato, 6o basi supra emarginato ; alis pallidis, fasciis apiceque fuscis.

Panorpa debilis, *Westw. Trans. Ent. Soc. Lond.* iv. 191, 18.

a. Trenton Falls, New York. Presented by E. Doubleday, Esq.
b. ——— ? From Mr. Children's collection.

19. Panorpa subfurcata.

Obscure fulva ; capite magis rufescente ; abdomine supra ad basin obscuro, segmento 5o cornu brevi dorsali armato ; alis fusco fasciatis, vena pone stigma ad apicem vix furcata.

Panorpa subfurcata, *Westw. Trans. Ent. Soc. Lond.* iv. 191, 19.

a. North America. Presented by the Entomological Club.
b—f. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.
g—l. Nova Scotia. From Lieut. Redman's collection.

20. Panorpa ruficeps.

Nigra ; capite femoribusque ferrugineis ; alis fuscescentibus immaculatis.

Panorpa ruficeps, *Newman, Zoologist*, 2835.

Genus 4. EUPHANIA.

Caput prothorace haud occultum, infra in proboscidem longitudine mediocri productum. Ocelli tres.

Euphania, *Westw. Trans. Ent. Soc. Lond.* iv. 192.

1. Euphania luteola.

Fulva, piceo varia ; antennis nigris basi fulvis, alis pallide luteis. Long. 5½ ; alar. 15½ lin.

Euphania luteola, *Westw. Trans. Ent. Soc. Lond.* iv. 192, pl. 14, f. 1.

a, b. Australia. From Mr. Argent's collection.
c. ——— ?

This genus may be united with *Chorista*. *Merope* seems to be nearer allied to this family than to the *Sialides*, with which it is placed.

Genus 5. BITTACUS.

Os in rostrum productum. Ocelli tres. Mandibulæ lineares, corneæ, apice acute bidentatæ. Maxillæ elongatæ, corneæ, basi cum mento connatæ, apice porrectæ, bifidæ, lobo externo interno parum breviore, lanceolato, apice subtilissime denticulato, interno lineari, apice hirsuto. Palpi maxillares 5-articulati, articulo 1o brevissimo, subgloboso, sequentibus cylindricis, 2o 3o breviori. Mentum cum maxillis connatum, apice truncatum. Labium membranaceum, attenuatum, apice profunde et acute emarginatum. Palpi labiales elongati, biarticulati, articulis linearibus, 2o 1o longiore. Ungues unguiculo unico armati.

Panorpa, p., *Linn.; Müller; Schr.; Fabr.; De Vill.; Sulzer; Römer; Shaw; Thunb.*
Bittacus, *Latr. Hist. Nat. Ins.* viii.; *Lam.; Leach; Guér.; Pictet; Klug; Westw.; Ramb.*

1. Bittacus italicus.

Testaceus; alis flavescentibus; tibiis apice fuscis.

Panorpa italica, *Müller, Manip. Ins. Taur. ed. Allioni, Miscell. Taurin.* iii. 194.
Panorpa tipuloides, *Schr. Beitr. Nat.* 82, 40; *Ins. Austr.* 317, 635.
Panorpa tipularia, *Fabr. Ent. Syst. emend.* ii. 98, 6. *Vill. Ent. Linn.* iii. 66, 5, pl. 7, f. 11. *Sulz. Ins.* 177, pl. 25, f. 7, 8. *Römer, Gen. Ins.* pl. 25, f. 7, 8. *Shaw, Gen. Zool.* vi. pl. 86.
Bittacus tipularius, *Latr. Hist. Nat. Ins.* viii. 20, 2; *Gen. Cr. et Ins.* iii. 189, 1. *Lam. Hist. Nat.* iv. 421, 1. *Guér. Icon. Règne Anim.* pl. 61, f. 2. *Leach, Ed. Enc.* ix. 137, 493, 1. *Burm. Handb. Ent.* ii. 956. *Ramb. Hist. Nat. Ins. Neur.* 326, 1.
Bittacus italicus, *Klug, Abh. Kön. Akad. Wiss. Berl.* 1836, 97, 1.

South Europe.

2. Bittacus capensis.

Testaceus; thorace utrinque maculis; capite medio antennisque nigris.

Panorpa capensis, *Thunb. Nov. Sp. Ins. Diss.* 3, 67, f. 7. *Dissert. Acad.* iii. 187, pl. 9, f. 15.
Bittacus capensis, *Klug, Abh. Kön. Akad. Wiss. Berl.* 1836, 97, 2.
a. South Africa. Presented by Dr. A. Smith.

3. Bittacus testaceus.

Testaceus; capite macula nigra; tibiis apice antennisque fuscis.
Bittacus testaceus, *Klug, Abh. Kön. Akad. Wiss. Berl.* 1836, 98, 3.
Cape, Senegal.

4. Bittacus Brasiliensis.

Testaceus; alis stigmate testaceo.
Bittacus Brasiliensis, *Klug, Abh. Kön. Akad. Wiss. Berl.* 1836, 98, 4.
Brazil.

5. Bittacus femoralis.

Testaceus; capite macula, femoribus anterioribus fere totis, posticis apice, tibiis apice tarsisque fuscis.
Bittacus femoralis, *Klug, Abh. Kön. Akad. Wiss. Berl.* 1836, 98, 5.
Brazil.

6. Bittacus Mexicanus.

Testaceus; capite macula media, femoribus litura apicali fuscis; alis subvenosis.
Bittacus Mexicanus, *Klug, Abh. Kön. Akad. Wiss. Berl.* 1836, 99, 6.
Mexico.

7. Bittacus flavescens.

Flavescens; abdomine apice clavato obscuriore; alis hyalinis, stigmate testaceo.
Bittacus flavescens, *Klug, Abh. Kön. Akad. Wiss. Berl.* 1836, 99, 7.
Brazil.

8. Bittacus nebulosus.

Testaceus; fronte macula media pedumque anteriorum femoribus tibiisque apice fuscis; alis venis testaceis, transversis subinfuscatis.

Bittacus nebulosus, *Klug, Abh. Kön. Akad. Wiss. Berl.* 1836, 99, 8.

Cape.

9. Bittacus Chilensis.

Pubescens; obscure testaceus; alarum venis transversis utrinque maculisque fusco nebulosis.

Bittacus chilensis, *Klug, Abh. Kön. Akad. Wiss. Berl.* 1836, 100, 9. pl. f. 6.

Chili.

10. Bittacus Blancheti.

Fuscus; alis hyalinis, fusco variegatis.

Bittacus Blancheti, *Pictet, Mém. Phys. Soc. Genève*, vii. 403, f. 3. *Klug, Abh. Kön. Akad. Wiss. Berl.* 1836, 100, 10. *Ramb. Hist. Nat. Ins. Neur.* 327, 3, pl. 8, f. 6.

Brazil.

11. Bittacus australis.

Rufus; capite thoraceque maculis, femoribus apice nigris.

Bittacus australis, *Klug, Abh. Akad. Wiss. Berl.* 1836, 100, 11.
Bittacus corethrarius? *Ramb. Hist. Nat. Ins. Neur.* 327, 2.

a, *b*. Port Stephen, New Holland. Presented by the Earl of Derby.
c. New Holland. Presented by Dr. Sinclair.
d—*g*. New Holland. Presented by the Haslar Hospital.
h. Van Dieman's Land. Presented by R. Butler, Esq.
i. Van Dieman's Land. From Mr. A. J. Smith's collection.
j. New Holland. From Mr. Shuckard's collection.
k—*p*. New Holland.

12. Bittacus affinis.

Testaceus; abdominis apice tarsisque posticis obscurioribus; alis pallide fuscescentibus, stigmate fusco, venisque parum fusco tinctis.

Bittacus affinis, *Westw. Trans. Ent. Soc. Lond.* iv. 196, 1.

a. Brazil.
b. Pará.

13. Bittacus punctiger.

Fulvescens; femoribus setis paucis nigris e guttis minutis fuscis prodeuntibus armatis; alis paullo latioribus nitidis, flavido-hyalinis, stigmate fere concolori guttisque numerosis paullo obscurioribus.

Bittacus punctiger, *Westw. Trans. Ent. Soc. Lond.* iv. 195, 2.

a, *b*. Georgia. From Mr. Abbot's collection.

14. Bittacus pallidipennis.

Totus fulvo-luteus; tibiarum apice summo nigricanti; alis pallidissime luteis unicoloribus, stigmate vix obscuriori.

Bittacus pallidipennis, *Westw. Trans. Ent. Soc. Lond.* iv. 195, 3.

a. ——— ?

15. Bittacus pilicornis.

Pallide fusco-luteus; pedibus lutescentibus; alis hyalinis, stigmate vix colorato; antennis longe pilosis.

Bittacus pilicornis, *West. Trans. Ent. Soc. Lond.* iv. 196, 4.

United States.

Var.? Pale testaceous: antennæ very pilose: legs slender, of equal thickness: wings limpid; stigma very pale brown; transverse veins clouded with brown. Length of the body 7 lines; of the wings 19 lines.

a, *b*. La Chine, near Montreal. Presented by Dr. Barnston.

16. Bittacus occidentis.

Testaceus; proboscidis apice palpis antennisque nigris; thoracis disco fuscescens; femora postica valida, fulva, apice nigra; femora antica nigra, basi fulva; tibiæ anticæ piceæ; alæ subluridæ, stigmate fusco, antennis nigris.

Testaceous: mouth towards the tip, palpi and antennæ black: disk of the thorax brownish: legs mutilated; hind-femora stout, tawny with black tips; fore-femora black, tawny towards the base; fore-tibiæ pitchy: wings slightly lurid; stigma brown; veins black. Length of the body 8 lines; of the wings 22 lines.

a. Erie, United States. Presented by E. Doubleday, Esq.

17. Bittacus indicus.

Luteus; antennæ pubescentes, apice obscuriores; abdomen ferrugineum; pedes sat graciles, æquales; alæ luridæ, apice subobscuriores, stigmate nullo, venis piceis basi fulvis.

Luteous: antennæ minutely pubescent, darker towards the tips: abdomen ferruginous: legs rather slender, of equal thickness: wings lurid; a little darker at the tips; stigma not coloured; veins pitchy, tawny towards the base. Length of the body 6 lines; of the wings 18 lines.

a. East Indies. From Archdeacon Clerk's collection.

18. Bittacus Sinensis.

Ferrugineus; antennæ pubescentes; abdomen piceo vittatum; pedes fulvi, graciles; alæ flavæ, stigmate fulvo, venis transversis fusco-nebulosis.

Ferruginous: antennæ pubescent: abdomen with a pitchy stripe: legs tawny, slender: wings yellow; stigma tawny; transverse veins clouded with brown. Length of the body 7 lines; of the wings 20 lines.

a. Shanghae, China. From Mr. Fortune's collection.

Fam. 4. NEMOPTERIDES.

Os in rostrum productum. Alæ posticæ longissimæ, ferè filiformes.

Nemopterides, *Ramb. Hist. Nat. Ins. Neur.* 332.
Nemopteridæ, *Newman.*

Genus 1. NEMOPTERA.

Nemoptera, *Latr.; Oliv.; Lam.; Klug; Ramb.*
Physapus, *Leach, Edin. Encycl.*
Nemopteryx, *Leach, Zool. Misc.*
Panorpa, p., *Linn.; Fabr.; Forsk.*
Ephemera, p., *Hasselquist.*

Div. 1.

Os valde elongatum, rostriforme.

Subdiv. 1.

Alæ anticæ fasciis anguliferis strigis punctisque plurimis nigris aut fuscis.

Group Nemoptera, *Rambur.*

1. Nemoptera Coa.

Corpore flavo nigroque variegato; alis pallidis, anticis punctis sparsis fasciisque repandis transversis quatuor, posticis tribus nigris.

Panorpa Coa, *Linn. Syst. Nat.* i. 2, 915, 4. *Kongl. Suenska. Vet. Handl.* 1747, viii. 176, pl. 6, f. 1. *Abh. Köngl. Schwed. Akad. Wiss. 9, 196,* pl. 6, f. 1. *De Vill. Ins.* iii. 95, 4. *Fabr. Syst. Ent. 314, 5; Ent. Syst. Suppl.* 208, 7. *Coqueb. Illustr. Icon. i. 15,* pl. 3, f. 3.
Panorpa halterata, *Fabr. Gen. Ins. Mant.* 245, 6; *Mant. Ins.* i. 251, 6.
Ephemera Coa, *Hasselquist, Iter Paloest.* 423. *Reise nach Palestina, a, d.* 462, 90.
Libella, &c., *Petiver, Op.* i. *dec.* vi. pl. 73, 11.

Papilio, &c., *Ruysch, Thesaur. Anim.* 1us, pl. 1, f. 1, 6.
Nemoptera Coa, *Oliv. Enc. Méth.* viii. 178, 1. *Lam. Hist. Nat. Anim. sans Vert.* iv. 419, 1. *Klug, Abh. Kön. Akad. Wiss. Berl.* 1836, 92, 1. *Ramb. Hist. Nat. Ins. Neur.* 333, 2, pl. 8, f. 3. *Crochard, Ed. Cuv. Règne Anim.* pl. 102, f. 2.
Nemoptera Ægyptiaca? *Ramb. Hist. Nat. Ins. Neur.* 334, 3. *Descript. de l'Egypte, Neur.* pl. 2, f. 15.

a. Albania. Presented by W. Wilson Saunders, Esq.
b. Albania. From Mr. Walker's collection.
c, *d*. Egypt. From Mr. Shuckard's collection.
e. ———? Presented by the Dowager Lady East.
f. ———?

2. Nemoptera sinuata.

Alis flavis, punctis fasciisque quatuor sinuatis nigris.

Nemoptera sinuata, *Oliv. Enc. Méth.* viii. 178, 2. *Lam. Hist. Nat. Anim. Invert.* iv. 419, 2. *Klug, Abh. Kön. Akad. Wiss. Berl.* 1836, 93, 2.
Nemoptera Coa, *Burm. Handb. Ent.* ii. 987, 9. *Ramb. Hist. Nat. Ins. Neur.* 335, 4.

Asia minor.

a. ———? From Mr. Children's collection.

*3. Nemoptera lusitanica.

Corpore nigro flavoque vario; alis anticis flavis, punctis numerosis fasciisque sinuatis transversis, posticis albidis, basi fasciaque fuscis.

Nemopteryx lusitanica, *Leach, Zool. Miscell.* ii. 74, 1, pl. 85, f. sup. *Burm. Handb. Ent.* ii. 987, 5. *Ramb. Faune d'Andalousie*, ii. pl. 9, f. 1; *Hist. Nat. Ins. Neur.* 332, 1.
Nemoptera Coa, *Latr. Hist. Nat. Ins.* xiii. 20, pl. 97, f. 2; *Gen. Crust. et Ins.* iii. 186, 1. *Klug, Abh. Kön. Akad. Wiss. Berl.* 1836, 93, 3.

a Malaga. Presented by Benj. Freud, Esq.
b—*d*, Portugal.

Subdiv. 2.

Alæ plerumque hyalinæ, posticæ plus minusve dilatatæ.

Group Halter, *Rambur.*

4. NEMOPTERA EXTENSA.

Corpore flavo ferrugineoque vario ; alis hyalinis, posticis ante apicem apiceque extensis et infuscatis.

Nemoptera extensa, *Oliv. Enc. Méth.* viii. 178, 4. *Lam. Hist. Nat. Anim. Invert.* iv. 419, 4. *Guér. Icon. Règne Anim.* pl. 61, f. 1. *Klug, Abh. Kön. Akad. Wiss. Berl.* 1836, 93, 4. *Ramb. Hist. Nat. Ins. Neur.* 336, 8.

Nemoptera halterata, *Dumeril, Dict. Sci. Nat. pl. Zool. Ent. Neuropt.* 27, f. 7.

Bagdad.

5. NEMOPTERA BARBARA.

Alis erectis pallidis, costa fusca, posticis linearibus longissimis subbiclavatis.

Nemoptera barbara, *Fabr. Ent. Syst. Suppl.* 208, 8. *Klug, Abh. Kön. Akad. Wiss. Berl.* 1836, 94, 5.

Barbary.

6. NEMOPTERA DILATATA.

Obscure fusca ; alis anticis hyalinis, posticis ante apicem biextensis fuscis, apice lacteis.

Nemoptera dilatata, *Klug, Abh. Kön. Akad. Wiss. Berl.* 1836, 94, 6, pl. f. 1.

South Africa.

Div. 2.

Os vix elongatum.

Group Brachystoma, *Rambur.*

7. NEMOPTERA COSTATA.

Corpore testaceo fuscoque variegato; alis hyalinis, anticis costa, posticis linearibus basi fasciaque testaceis.

Nemoptera halterata, *Oliv. Enc. Méth.* viii. 178, 3. *Lam. Hist. Nat. Anim. Invert.* iv. 419, 3.
Nemoptera costata, *Klug, Abh. Kön. Akad. Wiss. Berl.* 1836, 94, 7.
Nemoptera Olivieri, *Ramb. Hist. Nat. Ins. Neur.* 337, 9.

Alexandria.

8. NEMOPTERA HALTERATA.

Pallida, dorso fusco vario; alis anticis hyalinis, costa venisque pallidis, posticis linearibus, longissimis, basi pallidis, dein latioribus albis, fascia fusca.

Panorpa halterata, *Forsk. Descript. Anim.* 97, pl. 25, f. 2.
Nemoptera pallida, *Oliv. Enc. Méth.* viii. 179, 5, pl. 98, f. 1. *Lam. Hist. Nat. Anim. Invert.* iv. 419, 5. *Ramb. Hist. Nat. Ins. Neur.* 335, 5, pl. 8, f. 4.
Nemopteryx Africana, *Leach, Zool. Miscell.* ii. 74, pl. 85, f. inf. *Griff. Ed. Anim. Kingd.* xv. 324, pl. 105, f. 4.
Nemoptera halterata, *Klug, Abh. Kön. Akad. Wiss. Berl.* 1836, 94, 8.

Syria, Bagdad, Egypt, Sierra-Leone.

9. NEMOPTERA BACILLARIS.

Pallida, dorso fusco varia; alis hyalinis, anticis costa pallida, ad apicem infuscata, stigmate albo, posticis linearibus, longissimis, basi pallidis, ante apicem late fuscis.

Nemoptera bacillaris, *Klug, Abh. Kön. Akad. Wiss. Berl.* 1836, 95, 9, pl. f. 2.

South Africa.

10. NEMOPTERA SETACEA.

Pallida, dorso pedibusque fuscescentibus ; alis anticis hyalinis, ad apicem subinfuscatis, macula alba, posticis setaceis, apice albis.

Nemoptera setacea, *Klug, Abh. Kön. Akad. Wiss. Berl.* 1836, 95, 10, pl. f. 3.

a. South Africa. Presented by Dr. A. Smith.

11. NEMOPTERA CAPILLARIS.

Pallida, dorso luteo varia ; alis anticis hyalinis, venis fusco alboque variegatis reticulatis, macula ad marginem anticum ante apicali alba, posticis longissimis, setaceis, albis, basi hyalinis, reticulatis.

Nemoptera capillaris, *Klug, Abh. Kön. Akad. Wiss. Berl.* 1836, 96, 11, pl. f. 4.

Arabia Felix.

12. NEMOPTERA ARISTATA.

Albida ; alis albo-hyalinis, anticis macula ante apicali fusca, posticis setaceis.

Nemoptera aristata, *Klug, Abh. Kön. Akad. Wiss. Berl.* 1836, 96, 13, pl. f. 5.

Ambukohl.

13. NEMOPTERA ALBA.

Alba, immaculata ; alis posticis setaceis.

Nemoptera alba, *Oliv. Enc. Méth.* viii, 179, 6. *Lam. Hist. Nat. Anim. Invert.* iv. 419, 6. *Klug, Abh. Kön. Akad. Wiss. Berl.* 1836, 96, 12. *Ramb. Hist. Nat. Ins. Neur.* 336, 6.

Bagdad.

14. Nemoptera Africana.

Alis anticis ad apicem rotundatis, hyalinis, stigmate albo, nubila terminali fuscescenti, costa immaculata; posticis ad basin antennisque pallidis.

Nemoptera Africana, *Leach*, *MSS.*

Cape.

15. Nemoptera costalis.

Alis anticis ad apicem rotundatis, hyalinis, stigmate nigro nubila terminali alba, costa maculis parvis fuscis; posticis ad basin fuscescentibus, antennis pallidis.

Nemoptera costalis, *Westw. Trans. Ent. Soc. Lond.* i.; *Journ. Proc.* lxxv.

a. Interior of the Cape. From Mr. Westwood's collection.

16. Nemoptera angula.

Alis anticis ad apicem acutis, hyalinis, stigmate nigro, costa maculis parvis fuscis; posticis ad basin fuscescentibus; antennis elongatis fuscis. (An mas præcedentis?)

Nemoptera angula, *Westw. Trans. Ent. Soc. Lond.* i.; *Journ. Proc.* lxxv.

Cape.

17. Nemoptera Algirica.

Flava, rufo-fusco varia; caput parvum, fascia antica rufescente; pedes flavi; alæ anticæ hyalinæ costa rufescente-fusca, posticis fuscis bidilatatis apice flavo bimaculatis.

Nemoptera Algirica, *Ramb. Hist. Nat. Ins. Neur.* 336, 7.

Smaller than *N. pallida.* Yellow, varied with reddish brown: head small, with a reddish band on the mouth: legs yellow, brownish towards the tips: fore-wings hyaline; fore border tinged with pale reddish brown; second and third veins yellow, the others brown:

hind-wings brown, with two dilatations before their tips, first large, second much smaller, lanceolate at its tip; tips of the wings with two yellowish spots.

Algiers.

18. Nemoptera filipennis.

Subfulva; antennis fuscis; alis anticis hyalinis stigmate fusco, alis posticis longissimis filiformibus dimidio basali fusco apice albo.

Nemoptera filipennis, *Westw. Cab. Ind. Ent.* 70, pl. 34, f. 6.

a. North Bengal. From Miss Campbell's collection.

19. Nemoptera Huttii.

Nigra, subtus et utrinque flava, nigro varia; antennis crassis longis; alis anticis hyalinis, stigmate minimo fusco; posticis elongatis, fuscis, pone medium biextensis, incisionibus obliquis, apice hyalino; pedibus flavis. Long. alar. 18 lin.

Nemoptera Huttii, *Spence, MSS.; Westw. Trans. Ent. Soc.* v.; *Proc.* xxvii. pl. 8, f. 1.

a. West Australia. From Mr. Clifton's collection.

LIST

OF THE

SPECIMENS

OF

NEUROPTEROUS INSECTS

IN

THE COLLECTION

OF THE

BRITISH MUSEUM.

PART III.—(TERMITIDÆ—EPHEMERIDÆ).

PRINTED BY ORDER OF THE TRUSTEES.
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INTRODUCTION.

THE principal object of the present Catalogue has been to give a complete list of the specimens of Neuropterous Insects contained in the collection of the British Museum, indicating at the same time the peculiarities of each, as regards variation of character, locality, and the source from whence it has been derived. With this view, the different individuals of each species contained in the collection are indicated by the letters *a*, *b*, *c*, &c., following the name of the species and its synonymes, and the description, if it appeared to have been before undescribed.

This part of the Catalogue of Neuropterous Insects has been prepared and the new species described by Mr. FRANCIS WALKER, so well known for his attention to this order of Insects.

The continuation is in hand, and will follow as soon as it is completed.

JOHN EDWARD GRAY.

British Museum,
April, 1853.

CATALOGUE

OF

NEUROPTEROUS INSECTS.

Sub-order 4. CORRODENTIA.

Mandibulæ magnæ, corneæ, corrosivæ, maxillarum mando cornea, in apice dentata. Pedes ambulatorii, tarsis 2-5-articulatis. Alæ membranaceæ, homonomæ, venis transversis paucioribus vel nullis.

Corrodentia, p., *Burmeister.*

Fam. 1. PSOCIDÆ.

Palpi labiales nulli. Tarsi 2-3-articulati. Alæ vel nullæ vel inæquales, venis corneis expansæ.

Termes, p., *Linn.*
Hemerobius, p., *Linn.; Turt.*
Psoquilii, *Latr.*
Psocidæ, *Leach; Steph.; Westw.*
Psocina, *Burm.*
Psocides, *Ramb.*
Psocina Psocidæ, *Newman.*

"Head exserted: eyes hemispherical, widely distant: mandibles corneous: antennæ long, setaceous, multi-articulate: thorax narrow: abdomen with two caudal papillæ: wings recumbent, deflected; fore-wings ample, variously veined; hind-wings smaller, with fewer veins, slightly folded longitudinally: larva generally arboreal: pupa with rudimentary wings at the posterior angles of the wing-bearing segments."—*Newman.*

Genus 1. THYRSOPHORUS.

Caput angustum. Oculi minimi. Ocelli fere contigui. Antennæ hirsutæ, apud medium incrassatæ. Prothorax elevatus, gibbosus. Tibiæ anteriores compressæ; subdilatatæ; tarsi articulis duobus distinctis. Alæ vena cubitali simplici.

Thyrsophorus, *Burm. Handb. Ent.* ii. 2, 781. *Ramb. Hist. Nat. Ins. Neur.* 318.

Head narrow: eyes very small: ocelli almost contiguous: feelers tumid towards the middle: prothorax elevated and gibbous: anterior shanks compressed, slightly dilated: tarsi with only two distinct joints, the first thrice the length of the second.

1. Thyrsophorus speciosus.

Fuscus; capite, thorace, femoribusque ferrugineis; tibiis compressis hirtis; alæ anticæ maculis tribus costalibus albis.

Thyrsophorus speciosus, *Klug, MSS. Burm. Handb. Ent.* ii. 2, 782, 1.

Pará.

2. Thyrsophorus pennicornis.

Fuscus; pedibus alisque testaceis, his venis albis, mediis reticulatis.

Thyrsophorus pennicornis, *Burm. Handb. Ent.* ii. 2, 782, 2.

Bahia.

ROYAL ASIATIC SOCIETY

3. Thyrsophorus Spinolæ.

Rufus; antennæ nigræ basi fulvæ; abdomen, tibiæ tarsique nigra; alæ anticæ nigro-fuscæ, basi pallidiores, fasciis abbreviatis apud stigma alba rufa duabusque flavis ornatæ.

Thyrsophorus Spinolæ, *Ramb. Hist. Nat. Ins. Neur.* 318.

Third joint of the antennæ with minute, thin pubescence along one half from the base, with long, thick pubescence from thence to the tip: fore-wing with two discal areolets; the first nearly twice the size of the second, emitting a vein to the hind border; the second also emitting a vein to the hind border, and two veins towards the tip of the wing, of these the fore one ends in front of the tip of the wing, and the hind one shortly forms three branches, of which the fore one ends at the tip of the wing, and the middle one is shortly forked.

a. Pará. Presented by J. P. G. Smith, Esq.

4. Thyrsophorus leucotelus.

Piceus; caput fulvum; antennæ nigræ basi fulvæ; thorax fulvo varius; pedes fulvi, metatarso postico albido; alæ limpidæ, anticæ luteo albido fuscoque variæ, venis nigricantibus apud discum albis.

Third joint of the antennæ with more equal pubescence along the whole length: fore-wing with two discal areolets; the first very much larger than the second, emitting a vein to the hind border; the second also emitting a vein to the hind border, and two veins towards the tip of the wing, of these the fore one ends in front of the tip of the wing, and the hind one is shortly forked, the fore fork ends at the tip of the wing, the hind one is nearly parallel to it and emits two branches to the hind border, one near its base, the other near its tip. Pitchy: head tawny: antennæ black, pubescent, very much longer than the body; first, second and third joints tawny, third black towards the tip: thorax gibbous; its sides and the borders of its segments tawny: legs tawny, stout, pubescent; hind metatarsus whitish: fore-wings limpid in front except at the base and about the stigma where they are luteous, and in front of the tip where they are whitish; hind part mostly brown; veins blackish, mostly

white in the disk: hind-wings limpid. Length of the body 2½ lines; of the wings 9 lines.

a. Pará. From Mr. Stevens' collection.

5. Thyrsophorus ramosus.

Piceus; caput fulvum; antennæ nigræ basi fulvæ; thorax flavo varius; tibiæ flavæ; tarsi nigricantes; alæ anticæ fuscæ, basi et ad costam limpidæ, apud stigma rufo-fuscæ albo strigatæ.

Third joint of the antennæ with the pubescence of almost equal thickness along the whole length: fore-wing with two discal areolets; the first a little larger than the second, omitting a vein to the hind border; the second also emitting a vein to the hind border and two towards the tip of the wing, of these the fore one ends in front of the tip of the wing, and the hind one is shortly forked, the fore fork ends at a little in front of the tip of the wing, the hind one has a branch near its base and another a little beyond one-third of its length: the two discal areolets and some space beyond them are adorned with numerous little ramose veinlets, which proceed from the borders to the disks and are here and there united. Pitchy: head tawny: antennæ black, pubescent, full twice the length of the body; first, second and third joints tawny; third black towards the tip: thorax yellow on each side and along the borders of the segments: legs pubescent, stout; tibiæ yellow; tarsi blackish: fore-wings brown, limpid at the base and along the fore border except about the stigma where they are reddish brown; a whitish streak between the stigma and the tip; veins blackish; transverse veinlets in the disk white: hind-wings limpid, slightly gray at the tips. Length of the body 2 lines; of the wings 9 lines.

a. Pará. From Mr. Stevens' collection.

6. Thyrsophorus anticus.

Fulvus; caput antice flavum; antennæ luteæ apice nigræ; tarsi apice ferruginei; alæ limpidæ, anticæ vittis duabus ferrugineis, una apice alba, altera apice fusca.

Third joint of the antennæ equally pubescent from the base to the tip: fore-wing with two discal areolets; the first full four times

the breadth of the second, emitting a vein to the hind border; the second also emitting a vein to the hind border, and two towards the tip of the wing, of these the fore one ends in front of the tip of the wing, the hind one is very near the fore one and ends at a little in front of the tip of the wing; it emits two branches, one at one-third, the other at a little beyond two-thirds of the length: dorsum of the thorax forming a high horn which is slightly inclined forward. Tawny: head yellow in front: antennæ luteous, pubescent, nearly twice the length of the body; third and following joints towards the tips, and the whole of the last joint black: legs stout, pubescent, second joint of the tarsi ferruginous: wings limpid; fore-wings with two ferruginous stripes from the middle to the tips, the first costal with a white tip, the second discal with a brown tip; veins mostly yellow in the disk. Length of the body 2 lines; of the wings 10 lines.

a. Pará. Presented by J. P. G. Smith, Esq.

Genus 2. PSOCUS.

Antennæ simplices, setaceæ. Tarsi biarticulati. Alæ vena cubitali furcata.

Hemerobius, p., *Linn.*; *Berk.*; *Coqueb.*; *Stew.*
Psocus, p., *Fabr.*
Psocus, *Latr.*; *Panz.*; *Leach*; *Steph.*; *Burm.*; *Ramb.*
Chermes, p., *Roemer.*
Psocus et Cœcilius, *Curt.*

Div. 1. *Steph.*

Alæ anticæ areola discali transversa subquadrata.

Subdiv. 1. *Steph.*

Alæ anticæ vena 1a bifurcata.

Sect. 1. *Steph.*

Alæ variegatæ; venæ vix distinctæ.

Subsect. 1. *Steph.*

Antennæ pilosissimæ.

1. Psocus pilicornis.

Niger; antennæ longe pilosæ; alæ anticæ maculis nebulisque nigricantibus.

Psocus pilicornis, *Latr. Coqueb. Ill. Iconograph.* 13, pl. 2, fig. 12. *Steph. Ill. Brit. Ent. Mand.* vi. 117, 1. *Burm. Handb. Ent.* ii. 2, 779, 22.

a, *b*. England.
c. France.

2. Psocus picicornis.

Niger; antennæ piceæ; alæ anticæ albo fuscoque variæ.

Psocus picicornis, *Fabr. Ent. Syst. Suppl.* 204, 6. *Steph. Ill. Brit. Ent. Mand.* vi. 118, 2.
Hemerobius picicornis, *Turt. Syst. Nat.* iii. 402.

a, *b*. England.

Subsect. 2. *Steph.*

Antennæ nudæ, aut vix pilosæ.

3. Psocus fasciatus.

Flavus; caput et thorax lituris fuscis; abdomen nigrum; alæ anticæ hyalinæ, fasciis tribus atomisque numerosis nigris.

Hemerobius fasciatus, *Fabr. Ent. Syst.* ii. 85, 17.
Psocus fasciatus, *Fabr. Ent. Syst. Suppl.* 203. *Turt. Syst. Nat.* iii, 402. *Panz. Faun. Ins. Germ.* xciv. f. 20. *Steph. Ill. Brit. Ent. Mand*, vi. 118, 3. *Zett. Ins. Lapp.* 1052, 2.

a—*d*. England.

4. Psocus variegatus.

Niger; frons, thorax supra et abdomen ochracea; alæ anticæ nigricantes atomis albis.

Hemerobius variegatus, *Fabr. Ent. Syst.* ii. 85, 18.
Psocus variegatus, *Latr. Coqueb. Ill. Icon.* 13, pl. 2, f. 13. *Steph. Ill. Brit. Ent. Mand.* vi. 118, 4. *Burm. Handb. Ent.* ii. 2, 778, 11. *Ramb. Hist. Nat. Ins. Neur.* 332, 12.

Europe.

5. Psocus atomarius.

Piceus; caput flavum; pedes pallidi; alæ anticæ fuscæ atomis albis, stigmate semiflavo.

Psocus atomarius, *Steph. Ill. Brit. Ent. Mand.* vi. 118, 5.

England.

6. Psocus maculatus.

Piceus; antennæ pallidæ; pedes pallidi; alæ anticæ hyalinæ maculis remotis fuscis sparsis.

Psocus maculatus, *Steph. Ill. Brit. Ent. Mand.* vi. 119, 6.

England.

7. Psocus subfasciatus.

Ochraceus; caput et thorax nigro variegata; abdomen piceum; pedes pallidi; alæ anticæ hyalinæ fasciis duabus maculisque variis fuscis.

Psocus subfasciatus, *Steph. Ill. Brit. Ent. Mand.* vi. 119, 7.

England.

Sect. 2. *Steph.*

Alæ non variegatæ; venæ distinctæ.

Subsect. 1. *Steph.*

Areola discalis venula radiata clausa.

8. Psocus fuscipennis.

Fuscus; alis concoloribus, venis, fascia baseos arcuata, antennisque basi pallidis.

Psocus fuscipennis, *Burm. Handb. Ent.* ii. 2, 778, 9.
Brazil.

9. Psocus venosus (Nomen bis lectum).

Fuscus; alis concoloribus, venis basalibus stigmateque albis.

Psocus venosus, *Burm. Handb. Ent.* ii. 778, 10.
North America.

10. Psocus magnus.

Fuscus; segmenta flavo marginata; antennæ nigræ basi fuscæ; pedes testacei; alæ anticæ fuscæ, stigmate venisque flavis, his apice nigris, alæ posticæ subcinereæ venis nigris.

Antennæ minutely pubescent, more than twice the length of the body: fore-wings with a quadrate transverse discal areolet: longitudinal vein beneath the stigma deeply furcate. Brown, smooth: antennæ black, brown at the base: segments of the thorax and of the abdomen with yellow borders: legs testaceous; femora paler than the tibiæ; second joint of the tarsus half the length of the first: fore-wings brown; stigma yellow, large, triangular; veins yellow, black towards the tips; outer angle of discal areolet emitting two veins, the fore one extending to the tip of the wing and

emitting two forks to the hind border: hind-wings grayish with black veins. Length of the body 1¼ line; of the wings 7 lines.

a, *b*. Mount Pleasant, Ohio. Presented by the Entomological Club.

11. Psocus lineatus.

Ochraceus, fusco maculatus; caput lineis rufo-fuscis; alæ anticæ basi nigro fasciatæ.

Psocus lineatus, *Latr. Coqueb. Ill. Icon.* 12, pl. 2, fig. 8. *Steph. Ill. Brit. Ent. Mand.* vi. 119, 8. *Burm. Handb. Ent.* ii. 2, 780, 18. *Ramb. Hist. Nat. Ins. Neur.* 319, 2.
Chermes Buxi, *Roem. Gen. Ins.* 16, pl. 11, fig. 7.

a. England. Presented by F. Walker, Esq.
b—*d*. England.

12. Psocus Novæ Scotiæ.

Nigro-fuscus, flavo varius; antennæ nigræ; pedes testacei, tibiis apice tarsisque piceis; alæ limpidæ, anticæ fusco quadrimaculatæ.

Very nearly allied to *P. lineatus*.

Dark brown: head pale yellow, with two black spots behind, and two more contiguous between the eyes; disk of front brownish: palpi yellow with black tips: antennæ black, more than twice the length of the body: underside and borders of the segments of the thorax and of the abdomen pale yellow: legs testaceous, pubescent; tibiæ towards the tips and tarsi piceous; second joint of the tarsi a little shorter than the first: wings limpid; fore-wings with four brown spots, one occupying the stigma, one at the tip, and two on the hind border, the basal one joining a darker brown dot; veins black. Length of the body 1¼ line; of the wings 5¼ lines.

a. Nova Scotia. From Lieut. Redman's collection.

13. Psocus nebulosus.

Ochraceus; caput fusco lineatum; thorax maculis nigris; abdomen piceum; pedes pallidi; alæ anticæ hyalinæ venis nebulisque aliquot fuscis.

Psocus nebulosus, *Kirby, MSS.? Steph Ill. Brit. Ent. Mand.* vi. 119, 9.
Psocus nebulosus? *Burm. Handb. Ent.* ii. 2, 780, 17.

Luteus, fusco maculatus; fronte lineis 16 *fuscis convergentibus arcuatis; alis anticis fusco nebulosis.*

Psocus infuscatus? *Ramb. Hist. Nat. Ins. Neur.* 319, 1.
Mas? Psocus affinis? *Ramb. Hist. Nat. Ins. Neur.* 320, 4.

a. England.

14. Psocus similis.

Nigricans; antennæ nigræ; abdomen piceum; pedes picei; alæ immaculatæ, anticæ fuscescentes venis fuscis, posticæ subhyalinæ.

Psocus similis, *Kirby, MSS.? Steph. Ill. Brit. Ent. Mand.* vi. 120, 10.

a. England.

15. Psocus bifasciatus.

Flavo nigroque variegatus; alæ anticæ fasciis duabus transversis punctoque nigris.

Psocus bifasciatus, *Latr. Coqueb. Ill. Icon.* ii. pl. 2, fig. 4. *Steph. Ill. Brit. Ent. Mand.* vi. 120, 11. *Burm. Handb. Ent.* ii. 2, 780, 15.

a. England. Presented by J. C. Dale, Esq.
b—e. England.

16. Psocus striatus.

Piceus, flavo varius; caput testaceum fusco varium; pedes testacei, tibiis apice tarsisque fuscis; alæ limpidæ, anticæ fusco unimaculatæ et fasciatæ apice cinereæ.

Very nearly allied to *P. bifasciatus.*

Piceous: head testaceous, adorned between the eyes with numerous confluent brown dots which form a broad stripe, and have on each side an oblique stripe formed of three brown dots: front

with numerous brown streaks: clypeus piceous: borders of the segments of the thorax and of the abdomen yellow: legs testaceous, stout, pubescent; tarsi and tips of the tibiæ brown; second joint of the tarsi one-third of the length of the first: wings limpid; forewings gray towards the tips; stigma brown, from its base an irregular, interrupted, oblique, partly dark, partly pale brown band traverses the wing, which has also a brown spot in the disk behind the stigma; veins black. Length of the body 1¼ line; of the wings 4 lines.

a—d. Nova Scotia. From Lieut. Redman's collection.

17. Psocus contaminatus.

Piceus, nigro variegatus; antennæ fuscæ; pedes fusci; alæ anticæ fasciis duabus transversis basim versus stigmateque fuscis.

Psocus contaminatus, *Kirby, MSS.? Steph. Ill. Brit. Ent. Mand.* vi. 120, 12.

England.

18. Psocus megastigmus.

Ochraceus; caput fusco lineatum; thorax fusco nebulosus; alæ hyalinæ, anticæ fascia obsoleta media macula stigmateque magno, fuscis.

Psocus megastigmus, *Steph. Ill. Brit. Ent. Mand.* vi. 120, 13.

England.

19. Psocus subnebulosus.

Ochraceus, nigro variegatus; antennæ et pedes pallida; alæ hyalinæ, anticæ nebulis fuscescentibus.

Psocus subnebulosus, *Steph. Ill. Brit. Ent. Mand.* vi. 121, 14.

England.

Subsect. 2. *Steph.*

Areola discalis apud apicem interiorem aperta.

20. Psocus longicornis.

Niger; os pallidum; antennæ longæ, fuscæ; pedes pallidi; alæ anticæ hyalinæ stigmate fusco.

Hemerobius longicornis, *Fabr. Ent. Syst.* ii. 84, 14. *Turt. Syst. Nat.* iii. 402.
Psocus longicornis, *Fabr. Ent. Syst. Suppl.* 203, 1. *Udd. Diss. Nov. Ins.* 26, 52. *Panz. Faun. Ins. Germ.* xciv. f. 19. *Steph. Ill. Brit. Ent. Mand.* vi. 121, 15. *Burm. Handb. Ent.* ii. 777, 6. *Zett. Ins. Lapp.* 1052, 1. *Ramb. Hist. Nat. Ins. Neur.* 320, 3.
Psocus vitripennis, *Curt. Brit. Ent.* 648, 28.

a—c. England. Presented by F. Walker, Esq.
d. England.

21. Psocus immunis.

Fuscus, flavo variegatus; antennæ basi et pedes luteo-ochraceæ; alæ hyalinæ, stigmate subfusco.

Psocus immunis, *Steph. Ill. Brit. Ent. Mand.* vi. 121, 16.
Psocus Naso? *Ramb. Hist. Nat. Ins. Neur.* 320, 5.

a. England.

22. Psocus venosus.

Ochraceo-rufus; caput et thorax fusco punctata; antennæ fuscæ, articulo 1o luteo; pedes pallidi; alæ limpidæ, venis fuscescentibus.

Psocus venosus, *Steph. Ill. Brit. Ent. Mand.* vi. 121, 17.

a—c. England. Presented by F. Walker, Esq.
d, e. England.

23. Psocus vittatus.

Atro-fuscus; antennæ basi pallidæ; abdomen piceum; pedes pallidi; alæ anticæ vitta lata fusca, venis saturatioribus.

Psocus vittatus, *Kirby, MSS. Steph. Ill. Brit. Ent. Mand.* vi. 122, 18.

a. England. Presented by F. Walker, Esq.

24. Psocus ochropterus.

Pallide ochraceus, fusco punctatus; abdomen rufum; pedes flavi; alæ subochraceæ, venis fuscescentibus.

Psocus ochropterus, *Kirby, MSS. Steph. Ill. Brit. Ent. Mand.* vi. 122, 19.

Psocus flavidus? *Ramb. Hist. Nat. Ins. Neur.* 322, 9.

a, *b*. England.

25. Psocus flavidus.

Ochraceo-rufus; abdomen flavum; pedes pallidi; alæ hyalinæ, subfuscescentes, venis saturatioribus.

Psocus flavidus, *Kirby, MSS. Steph. Ill. Brit. Ent. Mand.* vi. 122, 20.

a, *b*. England. Presented by F. Walker, Esq.

26. Psocus flavicans.

Niger; prothorax flavus; abdomen ovatum, flavum; alæ hyalinæ.

Hemerobius flavicans, *Linn. Syst. Nat.* ii. 913; *Faun. Suec.* 512. *Fabr. Ent. Syst.* ii. 86, 22. *Turt. Syst. Nat.* iii. 403.

Psocus flavicans, *Fabr. Ent. Syst. Suppl.* 203, 2. *Steph. Ill. Brit. Ent. Mand.* vi. 122, 21. *Burm. Handb. Ent.* ii. 2, 781, 19. *Zett. Ins. Lapp.* 1054, 8.

Europe.

a. England. Presented by F. Walker, Esq.

b. ——— ? From Mr. Children's collection.

27. Psocus obsoletus.

Pallide rufo-ochraceus; capite postice abdominisque macula dorsali atris; alæ obscure fuscescentes, venis tenuissimis saturatioribus.

Psocus obsoletus, *Steph. Ill. Brit. Ent. Mand.* vi. 123, 22.

a. England.

28. Psocus hyalinus.

Fusco-piceus; abdomen basi ochraceo-flavum; pedes rufo-picei; alæ limpidæ, stigmate fusco.

Psocus hyalinus, *Steph. Ill. Brit. Ent. Mand.* vi. 123, 23.

a, *b*. England.

29. Psocus bipunctatus.

Flavo nigroque varius; alæ hyalinæ, anticæ maculis duabus nigricantibus.

Hemerobius bipunctatus, *Linn. Syst. Nat.*; *Faun Suec.* 1514. *Fabr. Ent. Syst.* ii. 86, 23. *Turt. Syst. Nat.* iii. 403.
Hemerobius Aphidioides, *Schr. Ins. Austr.* 629.
Psylla Aphidioides, *Geoffr. Ins. Par.* i. 488, 7.
Psocus bipunctatus, *Fabr. Ent. Syst. Suppl.* 204, 7. *Latr. Coqueb. Ill. Icon.* ii. pl. 2, f. 3. *Panz. Faun. Ins. Germ.* xciv. f. 21. *Leach, Edin. Encycl.* ix. 139. *Steph. Ill. Brit. Ent. Mand.* vi. 123, 24. *Burm. Handb. Ent.* ii. 779, 14. *Ramb. Hist. Nat. Ins. Neur.* 321, 7.

a—d. England. Presented by F. Walker, Esq.
e—g. England.

30. Psocus sexpunctatus.

Fuscus; alæ anticæ maculis fuscis punctisque sex distinctis.

Hemerobius sexpunctatus, *Linn. Syst. Nat.* ii. 913; *Faun. Suec.* 1511. *Fabr. Ent. Syst.* ii. 86, 20. *Berk. Syn.* i. 151. *Stew. Elem. Nat. Hist.* ii. 216. *Turt. Syst. Nat.* iii. 402.

Psylla sexpunctatus, *Geoffr. Ins. Par.* ii. 205, 10.
Psocus sexpunctatus, *Latr. Coqueb. Ill. Icon.* 13, pl. 2, f. 10. *Fabr. Ent. Syst. Suppl.* 203. *Steph. Ill. Brit. Ent. Mand.* vi. 123, 25. *Burm. Handb. Ent.* ii. 778, 8.
Psocus irroratus, *Curt. Brit. Ent.* 648.

a, *b*. England. Presented by J. C. Dale, Esq.
c. ———? From Mr. Children's collection.

31. Psocus quadrimaculatus.

Nigro flavoque varius; alæ anticæ maculis quatuor fuscis.

Psocus quadrimaculatus, *Latr. Coqueb. Ill. Icon.* 12, pl. 2, fig. 6. *Steph. Ill. Brit. Ent. Mand.* vi. 124, 26. *Burm. Handb. Ent.* ii. 2, 779, 13.

a. England. Presented by J. C. Dale, Esq.

32. Psocus striatulus.

Fuscus, flavo maculatus; alæ hyalinæ, anticæ fusco striatæ.

Psocus striatulus, *Fabr. Ent. Syst. Suppl.* 203. *Steph. Ill. Brit. Ent. Mand.* vi. 124, 27.
Hemerobius striatulus, *Turt. Syst. Nat.* iii. 402.
England.

33. Psocus flaviceps.

Fuscus; caput ochraceo-flavum; antennæ rufo-piceæ; pedes ochraceo-flavi; alæ hyalinæ, nebulis subfuscescentibus.

Psocus flaviceps, *Steph. Ill. Brit. Ent. Mand.* vi. 124, 28.
England.

34. Psocus subocellatus.

Niger, albido variegatus; antennæ breves; pedes pallidi; alæ hyalinæ, maculis nonnullis subocellatis venisque fuscescentibus.

Psocus subocellatus, *Steph. Ill. Brit. Ent. Mand.* vi. 124, 29.
a, *b*. England.

Subdiv. 2. *Steph.*

Alæ anticæ vena 1a trifurcata.

35. Psocus immaculatus.

Pallide ochraceus; antennæ longæ, fuscescentes; pedes pallidi; alæ limpidæ, venis tenuibus stigmateque fuscescentibus.

Psocus immaculatus, *Kirby, MSS. Steph. Ill. Brit. Ent. Mand.* vi. 125, 30.

England.

36. Psocus rufescens.

Rufescente-flavus, nigro maculatus; antennæ longæ; abdominis dorsum subpiceum; pedes ochraceo-pallidi; alæ limpidæ, stigmate concolore.

Psocus rufescens, *Steph. Ill. Brit. Ent. Mand.* vi. 125, 31.

England.

37. Psocus flavescens.

Ochraceo-flavus, immaculatus; antennæ longæ fuscæ; pedes pallide flavescentes; alæ limpidæ, stigmate subfuscescente, venis tenuissimis fuscescentibus.

Psocus flavescens, *Steph. Ill. Brit. Ent. Mand.* vi. 125, 32.

England.

38. Psocus quadripunctatus.

Niger; antennæ, abdomen et pedes pallida; alæ hyalinæ, anticæ basi punctis quatuor atris, apice fusco radiatæ.

Hemerobius quadripunctatus, *Fabr. Ent. Syst.* ii. 86, 24. *Turt. Syst. Nat.* iii. 403.

Psocus quadripunctatus, *Fabr. Ent. Syst. Suppl,* 204, 8. *Latr. Coqueb. Ill. Icon.* 12, pl. 2, f. 9. *Panz. Faun. Ins. Germ.* xciv. 22. *Steph. Ill. Brit. Ent. Mand.* vi. 776, 2. *Burm. Handb. Ent.* ii. 776, 2. *Ramb. Hist, Nat. Ins. Neur.* 321, 8.

Var. ? Psocus subfasciatus, *Ramb. Hist. Nat. Ins. Neur.* 322, 10.

a. England. Presented by F. Walker, Esq.
b—f. England.

39. Psocus subpunctatus.

Pallide rufus; antennæ et pedes pallida; alæ subflavescentes nebulis nonnullis obscuris venisque fuscescentibus.

Psocus subpunctatus, *Steph. Ill. Brit. Ent. Mand.* vi. 126, 34.
Psocus conspurcatus? *Ramb. Hist. Nat. Ins. Neur.* 323, 13.

a. England. Presented by F. Walker, Esq.

40. Psocus pupillatus.

Nigro-piceus; antennæ basi fulvæ, alis breviores; femora fulva; alæ cinereæ, anticæ basi fusco apice albido maculatæ.

Psocus pupillatus, *Dale, MSS.*

Piceous-black: antennæ minutely pubescent, tawny towards the base, shorter than the wings: legs piceous; femora dull tawny: wings grayish, fore-wings with the disks of the areolets brown, brown towards the tips with whitish spots on the areolets; veins black. Length of the body ¾ line; of the wings 2¼ lines.

a. England. Presented by J. C. Dale, Esq.

41. Psocus costalis.

Testaceo-rufus; caput et thorax fusco punctata; antennæ et pedes pallide rufa; alæ anticæ ad costam præsertim fusco maculatæ.

Psocus costalis, *Steph. Ill. Brit. Ent. Mand.* vi. 126, 35.

a. England.

42. Psocus nervosus (Nomen bis lectum).

Testaceo-rufus; thoracis dorsum et abdomen apice atra; alæ hyalinæ, venis fuscescentibus.

Psocus nervosus, *Steph. Ill. Brit. Ent. Mand.* vi. 126, 36.
England.

43. Psocus maculipennis.

Niger; pedes picei; alæ anticæ fusco-nebulosæ, maculis duabus magnis apicem versus saturatioribus.

Psocus maculipennis, *Steph. Ill. Brit. Ent. Mand.* vi. 126, 37.
England.

Div. 2. *Steph.*

Alæ anticæ areola discali nulla; vena 2a trifida.

44 Psocus nigricornis.

Niger; thoracis latera et pedes rufo-picea; alæ fusco-hyalinæ.

Psocus nigricornis, *Steph. Ill. Brit. Ent. Mand.* vi. 126, 38.
a. England. Presented by F. Walker, Esq.

45. Psocus phœopterus.

Rufo-piceus; antennæ pallide piceo-rufæ, breves, maris subpilosæ; pedes pallide piceo-rufi; alæ hyalinæ, saturate fuscæ.

Psocus phœopterus, *Kirby, MSS. Steph. Ill. Brit. Ent. Mand.* vi. 127, 39.
a, *b*. England. Presented by F. Walker, Esq.
♀, *d*. England.

46. Psocus nigricans.

Piceo-testaceus; thorax et abdomen supra nigricantia; pedes pallide testacei; alæ sublimpidæ, venis fuscis.

Psocus nigricans, *Kirby, MSS. Steph. Ill. Brit. Ent. Mand.* vi. 127, 40.
Hemerobius pedicularius? *Vill. Ent. Linn.* iii. 51, 11.
Psocus domesticus? *Burm. Handb. Ent.* ii. 2, 777, 4.
Psocus pedicularius? *Ramb. Hist. Nat. Ins. Neur.* 323, 15.

a, *b*. England.

47. Psocus abdominalis.

Fuscus; antennæ breves, pallidæ; abdomen flavum, ano nigro; pedes pallidi; alæ hyalinæ.

Hemerobius abdominalis, *Fabr. Ent. Syst.* ii. 86. *Turt. Syst. Nat.* iii. 403.
Psocus abdominalis, *Fabr. Syst. Ent.* 204, 9. *Stew. Elem. Nat. Hist.* ii. 217. *Steph. Ill. Brit. Ent. Mand.* vi. 127, 41.
Psocus fenestratus, *Curt. Brit. Ent.* 648. *Burm. Handb. Ent.* ii. 2, 778, 7.

a. England. Presented by J. C. Dale, Esq.

48. Psocus dubius.

Rufo-piceus; antennæ et pedes pallidiora; abdominis dorsum vitta nigricante; alæ hyalinæ, subflavescentes, venis subochraceo-fuscis.

Psocus dubius, *Steph. Ill. Brit. Ent. Mand.* vi. 127, 42.
Psocus pedicularius? *Latr. Coqueb. Ill.* 10, pl. 2, f. 1. *Burm. Handb. Ent.* ii. 776, 3.
Psocus binotatus? *Ramb. Hist. Nat. Ins. Neur.* 323, 14.

a—h. England. Presented by F. Walker, Esq.

Div. ——— ?

49. Psocus strigosus.

Rubro-testaceus; antennis longissimis subglabris; linea verticis, prothoracis maculis tribus, scutelloque fuscis.

Psocus strigosus, *Curt. Brit. Ent.* 648, 26. *Burm. Handb. Ent.* ii. 776, 1.

England.

50. Psocus lasiopterus.

Luteo-fulvus; dorso fusco maculato; alæ luteæ, venis fusco cinctis, longissime pilosis.

Psocus fuscopterus? *Latr. Coqueb. Ill. Icon.* 10, pl. 2, f. 2.
Psocus lasiopterus, *Burm. Handb. Ent.* ii. 2, 777, 5.
Germany.

51. Psocus nervosus.

Fusco-niger, luteo variegatus; fronte lineis 15 *punctorum nigrorum; pedes annulati; alæ anticæ fusco conspersæ, venis albo punctatis.*

Hemerobius nervosus, *Fabr. Ent. Syst.* ii. 85, 19.
Psocus nervosus, *Burm. Handb. Ent.* ii. 2, 780, 16.
Germany.

52. Psocus morio.

Niger, nitens, P. bifasciato *paullo brevior et crassior; antennæ fuscæ, villosulæ; abdomen apice luteum; pedes fusco-pallidi; alæ anticæ cupreo nitentes, basi dimidiate nigræ, puncto marginali triangulari nigro, apice venisque tribus albidis.*

Psocus morio, *Latr. Coqueb. Ill. Icon.* ii. pl. 2, f. 5. *Burm. Handb. Ent.* ii. 2, 781, 20.
France.

53. Psocus obscurus.

Rufo-fuscus, supra nigricans; antennæ nigræ, hirsutissimæ, alis valde breviores; pedes fuscescentes; alæ subfuscescentes, immaculatæ; stigma postice rotundatum, angulo interno nigro submaculato; areola discalis aperta.

Div. of *P. pilicornis?*
Psocus obscurus, *Ramb. Hist. Nat. Ins. Neûr.* 322, 11.
France.

54. Psocus alboguttatus.

Niger, magnitudinis mediæ; abdomen rufescens, segmentorum marginibus albo guttatis; alæ nigræ, maculis discalibus majoribus albis 6 puncto nigro inscriptis, vel subocellatis; intra marginem apicalem puncta 10 minora alba, duplici serie ordinata, alarum venæ nigræ; areola subcentralis petiolata, aperta, libera, vena superiore furcata, inferiore triramosa.

Psocus alboguttatus, *Dalman, Analecta Ent.* 98, 14.

Sweden.

55. Psocus vittatus.

Niger vel fuscus; antennæ pallide testaceæ, immaculatæ, breviter pubescentes, alis multo breviores; pedes pallide flavo-testacei, immaculati, tarsis apice infuscatis; alarum anticarum basin et discum occupat vitta latissima nigro-fusca, ad apicem usque producta, relicto margine apicali utrinque albo-hyalino, qui tamen ad stigma costale a ramulo vittæ interruptus; stigma album apice tantum a ramulo illo obscuratum; alæ posticæ dilutius, fuscæ, margine apicali antico albo-hyalino; venæ omnes nigro-fuscæ; areolæ discalis apicalis truncus inferior liber, venas emittens 3, omnes ad costam areola anguli inferioris libera, vena unica arcuata formata.

Psocus vittatus, *Dalman, Analecta Ent.* 98, 13. *Zett. Ins. Lapp.* 98, 13.

Sweden.

56. Psocus subfasciatus.

Fuscus; pedes pallidiores; alæ hyalinæ, anticæ maculis subquatuor parvis, fascia media stigmatoque antice posticeque albo tincto, fuscescentibus, areola discali quadrato-oblonga, angulo subobtuso ad marginem interiorem descendente, venarum furcis 2 apicalibus inæqualiter longis. Long. 1; alar. fere 3 lin.

Psocus subfasciatus, *Sundew, MSS. Zett. Ins. Lapp.* 1052, 3.

Lapland.

57. Psocus obliteratus.

Ferrugineo-fuscus, subnitidus; pedes pallidi; alæ hyalinæ immaculatæ, anticæ stigmate oblongo fumato, areola discali oblongo quadrata incompleta, venarum furcis 2 apicalibus inæqualiter longis. Long. $1\frac{1}{3}$; alar. 3 lin.

Psocus obliteratus, *Zett. Ins. Lapp.* 1052, 4.

Lapland.

58. Psocus subfumipennis.

Testaceus, nitidus; thoracis dorsum fuscum; pedes pallidi; alæ hyalino-cinereæ, anticæ areola discali irregulariter oblongo-quadrata, venis furcatis parallelis, furcis 2 apicalibus subæqualiter longis. Long. $\frac{3}{4}$; alar. $2\frac{1}{2}$ lin.

Psocus subfumipennis, *Zett. Ins. Lapp.* 1053, 5.

Lapland.

59. Psocus boreellus.

Testaceus, nitidus; thoracis dorsum obscurum; pedes pallidi; alæ cinereo-hyalinæ, anticæ areola discali nulla, venis furcatis parallelis, furcis inæqualiter longis, omnibus fuscedine cinctis, furcis 2 apicalibus subæqualiter longis. Long. $\frac{3}{4}$; alar. $2\frac{1}{2}$ lin.

Psocus boreellus, *Zett. Ins. Lapp.* 1053, 6.

Lapland.

60. Psocus striatus.

Testaceus, nitidus; pedes pallidi; alæ cinereo-hyalinæ, anticæ areola discali nulla, venis furcatis subparallelis, furcis æqualiter longis, omnibus fuscedine cinctis. Long. $\frac{3}{4}$; alar. $2\frac{1}{3}$ lin.

Psocus striatus, *Dalm. MSS. Zett. Ins. Lapp.* 1053, 7.

Lapland.

61. Psocus microphthalmus.

Testaceus, gibbus; thoracis latera et abdomen fusco varia; tibiæ tarsique fuscescentia; alæ subfuliginosæ; stigma album.

Psocus microphthalmus, *Ramb. Hist. Nat. Ins. Neur.* 321, 6.

Nearly the size of *P. longicornis*, pale testaceous. Head large; front very gibbous, without marks or striæ: eyes very small, not prominent: mesothorax very gibbous above: sides of the thorax and abdomen slightly clouded with brown: tibiæ and tarsi brownish: wings very slightly fuliginous, rather darker along the hind borders and at the tips; veins very distinct, mostly yellow, stigma white; discal areolet very large.

Exotic?

Genus 3. ATROPOS.

Tarsi triarticulati. Alæ nullæ.

Atropos, *Leach; Latr.; Nitzsch; Steph.*
Termes, p., *Linn.; De Geer; Schæff.; Wood.*
Pediculus, p., *Geoffr.*
Psocus, p., *Fabr.*
Troctes, *Burm.*
Atropos et Lachesilla, *Westw.*

1. Atropos pulsatorius.

Pallidus; os rubrum; oculi lutei; venter macula fusca.

Atropos pulsatorius, *Steph. Ill. Brit. Ent. Mand.* vi. 128, 1. *Ramb. Hist. Nat. Ins. Neur.* 324.
——— *Allen, Phil. Trans.* 1693. *Derham, Phil. Trans.* 1701. *Stackhouse, Phil. Trans.* 1724.
Termes pulsatorium, *Linn. Syst. Nat.* ii. 1015, 2. *Faun. Suec.* 1937. *Schæff. El. Ent.* pl. 126, f. 1; *Icon.* pl. 269, f. 4, *a*, *b*. *Geoffr. Ins. Par.* ii. 601, 12. *Wood, Ill. Lin. Gen. Ins.* ii. 120, pl. 75.

Termes lignarium, *Deg. Ins.* vii. 41, pl. 4, f. 3.
Hemerobius pulsatorius, *Fabr. Ent. Syst.* ii. 87, 26.
Psocus pulsatorius, *Fabr. Ent. Syst. Suppl.* 204, 10. *Latr. Coqueb. Ill. Icon.* 14, pl. 2, f. 14. *Blanch. Hist. Nat. Ins.* 48, 2.
Atropos lignarius, *Leach, Edin. Encycl.* ix. 139.
Troctes pulsatorius, *Burm. Handb. Ent.* ii. 2, 773, 1.

Europe.

2. Atropos fatidicus.

Ochraceus; os pallidum; abdomen ovatum.

Atropos fatidicus, *Steph. Ill. Brit. Ent. Mand.* vi. 129, 2.
Termes fatidicum, *Linn. Syst. Nat.* ii. 1016; *Faun. Suec.* 1938.
Psocus fatidicus, *Fabr. Syst. Ent.* 204, 11.
Troctes fatidicus, *Burm. Handb. Ent.* ii. 2, 774, 2.

Europe.

Genus 4. CLOTHILLA.

Corpus parvum, apterum. Caput subtriangulare. Thorax capite vix latius. Prothorax brevis. Abdomen ovatum, subconvexum, prothorace mesothorace aut metathorace brevior. Antennæ longæ, gracillimæ, articulis circiter 27; 1us et 2us crassi. Pedes simplices; tarsi 3-articulati.

Clothilla, *Westw. Trans. Ent. Soc. Lond.* iv. 72.

1. Clothilla studiosa.

Luteo-albida; labro pedibusque albidis; oculis, antennis abdominisque incisuris fuscis. Long. 1 lin.

Clothilla studiosa, *Westw. Trans. Ent. Soc. Lond.* iv. 72; *Proc.* 4.

England.

Genus 5. LEPINOTUS.

Ocelli 2, contigui. Tarsorum articulus 1us 2o duplo longior.

Lepinotus, *Von Heyden, Ent. Zeit. Stett.* xi. 84.

Crown with three contiguous ocelli: first joint of the tarsi twice the length of the second: two rudiments of wings.

1. LEPINOTUS INQUILINUS.

Obscure fuscus, breviter pubescens; antennis pedibusque flavescentibus; femoribus anticis crassis. Long. ⅓ lin.

Lepinotus inquilinus, *Von Heyden, Ent. Zeit. Stettin*, xi. 84.
Austria, Tyrol, Hungary.

Fam. 2. TERMITIDES.

Labium fissum. Tarsi 3-4-articulati. Alæ æquales.

Termes, p., *Linn.*
Termitides, *Latr.*
Termitidæ, *Leach; Westw.*
Corrodentia, p. (Termitina et Embidæ), *Burm.*
Termitina (Termitidæ et Embiadæ), *Newman.*

"Imago flies slowly and laboriously, and rids itself of its wings before founding a new colony. Antennæ moderately long, moniliform. Head depressed, received in the prothorax. Eyes hemispherical, small, distant, lateral. Mandibles strong, corneous. Prothorax transverse, fully developed. Wings 4, long, membranous, of equal size and form, decumbent but not deflected when at rest; hind pair not folded. Abdomen with 2 minute caudal papillæ. Tarsi 3- or 4-jointed. Larva and pupa terrestrial, active, hexapod, furnished with powerful mandibles: social, constructive, voracious, omnivorous."—*Newman.*

Genus TERMES.

Tarsi 4-articulati. Alarum venæ discales obsoletæ membranaceæ, recurrentes nullæ.

Termes, *Linn., &c.*
Termitina, *Burm.; Hagen, Ueber die Lebens weise der Termiten und ihre Verbreitung.*
Termitidæ, *Newman.*

Rambur divides Termes into the two following groups:—

a. Costal space traversed by oblique veins.

T. flavicollis, ochraceus, pallidus, quadricollis, obesus.

a a. Costal space without veins.

T. lucifugus, morio, Mauricianus, costatus, grandis, angustatus, subhyalinus, dirus, nigricans, Rippertii, trinervius, dubius, cephalotes.

1. Termes flavicollis.

Fuscus; ore, antennis, prothorace pedibusque testaceis; alis in medio purpureo, lateribus æneo-micantibus.

Termes flavicollis, *Fabr. Ent. Syst.* ii. 91, 6. *Descript. de l'Egypte, Neur.* pl. 2, f. 12. *Burm. Handb. Ent.* ii. 764, 1. *Ramb. Hist. Nat. Ins. Neur.* 302, 1.

T. flavicollis ?—Testaceous, sublinear, smooth, shining, thinly pubescent, paler beneath: head elliptical, flat above, very little broader than the thorax: ocelli 2, one on each side, close to the eye: palpi short, straw-colour: antennæ straw-colour, 16-jointed, nearly as long as the head: prothorax nearly twice broader than long, slightly concave in front, slightly convex on each side, straight behind: abdomen widening from the base to the tip, a little broader but hardly longer than the thorax: legs straw-colour; fourth joint of the tarsi as long as all the other joints: wings quite colourless and transparent, more than twice the length of the body; costal and subcostal veins testaceous; the other veins obsolete. Length of the body 2¼ lines; of the wings 10 lines.

a—b. ——— ? From Mr. Children's collection.

T. flavicollis? Larva?—Straw-colour, smooth, bare, shining, sublinear: head short-elliptical, a little broader than the thorax: eyes none: ocelli 2, one on each side between the antennæ: mandibles small, with black tips: palpi short: antennæ with not more than 16 joints, hardly more than half the length of the head: prothorax more than twice broader than long, slightly impressed in front and behind, almost straight on each side, with an indistinct longitudinal furrow: abdomen rounded towards the tip, longer than the thorax: legs short; fourth joint of the tarsi twice the length of all the other joints. Length of the body 1½ line.

a. Marseilles.

T. flavicollis? Soldier.—Ferruginous, tawny or piceous, pubescent, shining: head almost oval, very much broader than the rest of the body, and nearly as long, impressed in front, with two sutures beneath: clypeus narrow, conical: eyes and ocelli none: palpi short: antennæ shorter than the head; first and second joints short; third rather long; the following successively decreasing in length: prothorax more than twice broader than long, impressed before and behind, convex on each side, with a slight longitudinal suture: mesothorax much shorter than the prothorax: metathorax much shorter than the mesothorax: abdomen a little longer and broader than the thorax: legs long; fourth joint of the tarsi more than twice the length of all the other joints.

a. ——— ?

T. fatalis? Labourer.—Testaceous, slender, linear, pubescent, shining: head cylindrical, tawny and impressed in front, with the mandibles nearly as long as the rest of the body, with two furrows beneath: eyes and ocelli none: palpi testaceous, small: mandibles black, stout, curved, acute, toothed near the base: prothorax subquadrate, broader than long, deeply indented on the fore border: abdomen not longer than the thorax: legs short, stout; fourth joint of the tarsi twice the length of all the other joints; claws long, thick. Length of the body 2½ lines.

a. ——— ? From Mr. Children's collection.

Var. ? Like the last, but with the sides of the thorax angular: sides of the prothorax straight, angular in front. Length of the body 4—6 lines.

a. Tripoli.
b—e. ——— ?

T. flavicollis? Piceous, rather flat, very thinly pubescent, sublinear: head oval, very much longer than broad, tawny in front and with a convex protuberance of that colour between the eyes, nearly as broad as the thorax: ocelli two, small, one on each side at some little distance from the eye: mandibles small, acute, black towards the tips: antennæ tawny, as long as the head, with not less than twenty joints: prothorax scutcheon-shaped; fore border nearly straight, indented in the middle; hind border convex, much narrower: mesothorax and metathorax with the basal parts of wings: abdomen fusiform, with nine segments of nearly equal size, longer than the thorax: legs tawny; fourth joint of the tarsi longer than all the preceding joints. Length of the body 4½ lines.

a. West Coast of Africa. From Mr. Fraser's collection.

2. TERMES PALLIDUS.

Flavo-rufus, T. flavicolli *similis, minor; antennis pedibusque pallidis; femoribus crassis; alis albis, venis costalibus rufis.*

Termes pallidus, *Ramb. Hist. Nat. Ins. Neur.* 303, 3.

Smaller than *T. flavicollis*, entirely yellowish red: prothorax almost like that of *T. flavicollis*: feelers and legs pale; thighs very short and thick: wings white, slightly rugose; the two costal veins red; costal space traversed by 4—5 veinlets; secondary veins moderately numerous and distinct; first of the two longitudinal veins bent after its middle to the second costal vein which it joins.

Isle of France.

T. pallidus?—Tawny, almost bare, testaceous beneath: head elliptical, longer than broad, as broad as the thorax, testaceous in front, with a very slight furrow on the disk: ocelli none: mandibles short, broad, black towards the tips, with two teeth: antennæ pubescent, with more than fifteen joints, not longer than the head? joints increasing in length towards the tips: prothorax twice broader than long, slightly concave in front and equally convex behind; sides somewhat rounded: abdomen subelliptical, shorter and a little broader than the thorax: legs testaceous, pubescent; fourth joint of the tarsi twice the length of all the preceding joints: wings dingy white, slightly rugulose and opaque, very much longer than

the body; veins along the costa tawny; subcostal space slightly tawny, with six or more very oblique transverse veins; space between the subcostal vein and the discal vein rather closely and irregularly reticulated; discal vein emitting about ten secondary veins, some of which are forked, and the spaces between them are more or less reticulated. Length of the body 4 lines; of the wings 14 lines.

a. ——— ?

3. Termes lucifugus.

Fuscus; ore, antennis pedibusque pallidis; alis purpureo-micantibus. Long. 2½; alar. 4 lin.

Termes lucifugus, *Rossi, Faun. Etrusc. Mant.* i. p. 107, pl. 5, f. k. *Latr. Gen. Cr. et Ins.* iii. 206, 1. *Blanch. Hist. Ins.* 47, 4. *Burm. Handb. Ent.* ii. 764, 2. *Guér: Icon. Règne Anim. Ins.* pl. 63, f. 3. *Ramb. Hist. Nat. Ins. Neur.* 204, 6.

South Europe.

T. lucifugus ?—Piceous, partly testaceous, linear, bare, shining, rather broad: head subelliptical, rather flattened on the disk, as broad as the thorax: prothorax full twice broader than long; sides nearly straight: abdomen subfusiform, longer and a little broader than the thorax: legs testaceous; fourth joint of the tarsi much longer than all the others; wings removed. Length of the body 2 lines.

a. Marseilles.

T. lucifugus ?—Tawny; underside, head in front, antennæ, palpi and legs testaceous: ocelli two, one on each side very near the eye: abdomen slightly widening from the base to the tip: wings removed. Length of the body 1½ line.

a. ———? From Mr. Children's collection.

Piceous, narrower than the first: head in front, antennæ, tibiæ and tarsi tawny: abdomen not broader than the thorax: wings removed. Length of the body 1¾ line.

a, b. ———?

4. Termes castaneus.

Flavo-castaneus ; fronte retusa ; alæ costis marginalibus tribus corneis. Long. 3 ; alar. 5 lin.

Termes castaneus, *Burm. Handb. Ent.* ii. 2, 764, 3.
California and Porto Rico.

T. Californiæ ?—Pale ferruginous, sublinear, bare, shining, tawny beneath: head elliptical, flat above, with an impression between the eyes and another between the antennæ, testaceous in front, a little broader than the thorax, with a black spot on each side in front of the base of the antenna: ocelli none: clypeus rather long: antennæ with about twenty-seven joints, a little longer than the head: prothorax nearly twice broader than long, with a slight longitudinal furrow, convex on each side and behind, slightly concave in front: abdomen subfusiform, a little broader but not longer than the thorax, with two short quadriarticulate pubescent appendages at the tip: legs tawny; tibiæ with a few short spines; fourth joint of the tarsi twice the length of all the other joints: wings pale brown, full twice the length of the body, thickly reticulated with veinlets which mostly form irregular quadrilateral areolets; six very oblique transverse veins along the fore border, the four last connected by transverse veinlets. Length of the body 4½ lines; of the wings 20 lines.

a—d. California. From M. Hartweg's collection.

5. Termes nasutus.

Fuscus ; ore, antennis, pedibus ventreque flavo-rufis ; fronte cornuta. Long. 3 ; alar. 5 lin.

Phryganea nasuta, *Deg. Ins.* iii. 367, pl. 27, f. 6, 7.
Hemerobius marginatus, *Linn. Syst. Nat.* ii. 912, 9.
Termes monoceros, *König, Berl. Schrift.* iv. pl. 1. *Perty, Delect. Anim. Artic.* 127, pl. 25, f. 10.
Termes nasutus, *Burm. Handb. Ent.* ii, 2, 764, 4.

Surinam.

T. nasutus ?—Piceous, sublinear, pubescent, shining, testaceous beneath: head nearly elliptical, depressed above, testaceous towards the mouth, full as broad as the thorax: ocelli two, one on each side, at some distance from the eye: antennæ tawny, a little longer than the head: prothorax twice broader than long, slightly concave in front, almost straight behind, convex on each side: abdomen subfusiform, luteous beneath, a little broader but hardly longer than the thorax: legs testaceous; fourth joint of the tarsi much longer than all the other joints: wings grayish brown, full twice the length of the body; veins brown; transverse veins before and behind the subcostal vein indistinct; discal longitudinal veins with about twelve distinct secondary veins. Length of the body 3 lines; of the wings 12 lines.

a. Brazil. Presented by J. P. G. Smith, Esq.
b. Pará. From Mr. Stevens' collection.

6. Termes ochraceus.

Totus testaceus; alæ subcinereæ, areolis reticulatis, costa marginali necnon venarum prima cum ramis omnibus corneis. Long. 4; alar. 9 lin.

Termes ochraceus, *Burm. Handb. Ent.* ii. 2, 765, 5. *Descript. de l'Egypte, Neur.* pl. 2, f. 11. *Ramb. Hist. Nat. Ins. Neur.* 303, 2.

Egypt.

T. ochraceus ?—Pale luteous, shining, pubescent, nearly linear, testaceous beneath: head nearly elliptical, hardly depressed above, as broad as the thorax: ocelli two, one on each side close to the eye: mandibles mostly black: antennæ pale testaceous, longer than the head: prothorax very much broader than long; fore border hardly concave; sides and hind border hardly convex: abdomen slightly increasing in breadth towards the tip, a little broader but not longer than the thorax: legs pale testaceous: wings slightly testaceous, nearly twice the length of the body, a little opaque and rugulose: veins pale; transverse veins between the costa and the subcosta distinct. Length of the body 2 lines; of the wings 8 lines.

a, b. ———? From Mr. Children's collection.

7. Termes viator.

Fuscus; ore, antennis, pedibusque dilutioribus; fronte bipunctata; ocellis nullis; alarum costis 3-4 marginalibus corneis. Long. 6 lin.

Termes capensis, *Deg.* vii. 24, pl. 38, f. 1—4.
Termes viator, *Latr. Nouv. Dict. d'Hist. Nat.* xxii. 49; *Hist. Nat. Cr. et Ins.* xiii. 51. *Fabr. Ent. Syst.* ii. 91, 6, *annot. Burm. Handb. Ent.* ii. 2, 765, 6.
Termes viarum, *König, Berl. Schrift.* vi. pl. 1.

Cape.

Female, Queen.—Head and thorax ferruginous: abdomen whitish. Length of the body 42 lines; breadth of the body 18 lines: length of the head 1 line; of the thorax 2 lines.

a. (In spirits). Cape Coast Castle. Presented by — Williams, Esq.

Soldier.—Testaceous, pubescent, shining: head subelliptical, broader and longer than the thorax, rather flat above, with a black spot on each side by the base of the clypeus: eyes small: ocelli none: antennæ with twenty-seven or more short joints, shorter than the head: prothorax nearly twice broader than long, narrower behind, with a tranverse furrow, in front of which it is slightly elevated and applied to the head; fore border nearly straight: abdomen as long as the thorax, with a very short filament on each side at the tip: legs long; fourth joint of the tarsi a little longer than all the other joints. Length of the body 6 lines.

a. South Africa. From Mr. Pearson's collection.

Labourer.—Pale brown, testaceous beneath: head short elliptical, piceous, very much broader than the thorax, with a testaceous dot on each side between the eyes: clypeus testaceous along the fore border: eyes small: ocelli none: mandibles short, triangular, armed with short obtuse teeth: palpi testaceous; tips pale brown: antennæ pale brown, testaceous at the base, shorter than the head: hind borders of the segments of the thorax and of the abdomen and legs testaceous. Length of the body 5 lines.

a. South Africa. From Mr. Pearson's collection.

T. viator?—Piceous, linear, shining, bare, tawny beneath; head subelliptical, depressed between the eyes, tawny in front, hardly broader than the thorax: ocelli two, one on each side, very near the eye: antennæ tawny: prothorax full twice longer than broad, concave in front, convex on each side and behind where it is slightly impressed: abdomen hardly broader or longer than the thorax: legs tawny; fourth joint a little longer than all the other joints: wings dingy whitish, slightly fawn-coloured along the fore border, full twice the length of the body; costal and subcostal veins tawny, space behind the latter indistinctly and irregularly reticulated with veinlets, some of these also occur in front of the discal longitudinal vein; the other veins almost colourless. Length of the body 4—6 lines; of the wings 20—36 lines.

a, b. Port Natal. From Dr. Krauss' collection.
c—n. ———?

8. Termes fatalis.

Fuscus; ore, antennis, pedibus, macula prothoracis media dorsoque testaceis; fronte subprominula; alis fuscescentibus. Long. 7; alar. 18 lin.

Termes fatalis, *Fabr. Ent. Syst.* ii. 87, 1. *Burm. Handb. Ent.* ii. 2, 765, 7.
Termes bellicosus, *Smeathman, Phil. Trans.* lxxi.
Sierra Leone.

T. fatalis?—Piceous, smooth, shining, bare, sublinear: head elliptical, ferruginous, paler in front and beneath, a little shorter than the rest of the body, with a porrect horizontal horn in front: eyes very small, in a cavity on each side in front: ocelli none: mandibles long, curved, acute, unidentate, piceous except at the base: palpi and antennæ tawny: prothorax nearly semicircular, more than twice longer than broad; fore border straight, forming an acute angle on each side, and with two porrect horizontal acute horns in the middle: mesothorax and metathorax very short, angular on each side: abdomen with nine short equal segments: legs tawny, rather slender; fourth joint of the tarsi longer than all the preceding joints. Length of the body 2 lines.

a. Sierra Leone. Presented by the Rev. D. F. Morgan.

T. fatalis? Female.—Ferruginous, pubescent: head a little longer than broad, as broad as the thorax, tawny in front and beneath: ocelli two, one on each side between the eyes, but at some distance from them: mandibles broad, short, black towards the tips: antennæ 19-jointed, nearly as long as the head; joints of equal length: prothorax obconical: abdomen linear, much longer than the thorax, tawny beneath: legs tawny; fourth joint of the tarsi longer than the three preceding joints: wings brown, nearly twice the length of the body; no transverse subcostal veins; discal longitudinal vein emitting about twelve secondary veins. Length of the body 4½ lines; of the wings 18 lines.

a. Gambia.

T. fatalis? Labourer?—Ferruginous, pubescent, sublinear, tawny beneath: head nearly twice longer than broad, tawny in front, depressed on the disk, with a convex protuberance between the antennæ, as broad as the thorax: ocelli two, one on each side, very near the eye: mandibles black towards the tips: antennæ tawny, mutilated, longer than the head? prothorax scutcheon-shaped; fore border nearly straight, indented in the middle; hind border convex, much narrower: mesothorax and metathorax with the basal parts of wings: abdomen with nine segments of nearly equal size, a little longer than the thorax: legs tawny. Length of the body 5 lines.

a. Congo. Presented by Sir. John Richardson.

9. TERMES DIRUS.

Fuscus; ore, puncto frontali, antennis, pedibus pectoreque ferrugineis; alæ fuscescentes, costis duabus marginalibus corneis. Long. 7; alar. 18 lin.

Termes dirus, *Klug. Burm. Handb. Ent.* ii. 2, 766, 8. *Ramb. Hist. Nat. Ins. Neur.* 307, 13.

Termes flavicollis, *Perty, Delect. Anim. Artic. Bras.* 128, pl. 26, f. 11.

Termes obscurum, *Blanch. Hist. Ins.* pl. 47, f. 1.

Brazil.

T. dirus.—Pale ferruginous, sublinear, bare, shining: head elliptical, concave between the eyes, a little narrower than the thorax: ocelli none: antennæ tawny, very much longer than the head, with about twenty-two joints: prothorax more than twice broader than long, almost transversely semi-elliptical, nearly straight in front, convex on each side and behind: mesothorax and metathorax scutcheon-shaped: abdomen piceous, subfusiform, longer than the thorax: fourth joint of the tarsi more than twice the length of all the other joints: wings dark brown, piceous along the fore border, about twice the length of the body; transverse oblique veins behind the subcostal vein, and secondary veins towards the hind border indistinct Length of the body 9 lines; of the wings 32 lines.

a. Interior of Brazil. Presented by the Entomological Club.
b. Pará. Presented by Reginald Graham, Esq.
c. Pará. Presented by J. P. G. Smith, Esq.
d. Brazil. From Mr. Stevens' collection.
e. ——— ? From Mr. Children's collection.
f. ——— ?

T. dirus.—Testaceous, convex, smooth, shining, pubescent: head twice the breadth of the thorax, very thick, narrower and impressed in front: eyes and ocelli none: mandibles piceous, tawny at the base, strong, curved, edged, acute, with a stout tooth near the base: palpi long: antennæ 19-jointed, longer than the head: prothorax, mesothorax and metathorax severally with a strong acute spine projecting from each side: prothorax more than twice broader than long, vertical in front and applied closely to the head, straight behind: abdomen fusiform, nearly twice the length of the thorax, with ten segments of equal size: legs long; fourth joint of the tarsi more than twice the length of all the other joints. Length of the body 3—7 lines.

a, b. Demerara. Presented by Mr. Bowerbank.
c, d. ——— ? From Mr. Children's collection.

Var. *β.* Head a little narrower.

a, b. Brazil. From Mr. Mornay's collection.
c, d. ——— ?

Var. γ. Head narrower than in var. *a*, spines of the thorax shorter.

a. British Guiana. Presented by Sir. R. Schomburgk.

Var. δ. Smaller: head much narrower, with shorter and black mandibles: spines of the thorax short.

a, *b*. Demerara. Presented by Mr. Bowerbank.

Var.? Head much smaller, with a yellow dot on the disk: mandibles small, concealed beneath the clypeus: antennæ as long as two-thirds of the body.

a. Pará. Presented by Reginald Graham, Esq.

Var.? Like the last, but smaller: head narrower: spines of the thorax rudimentary.

a. Rio Janeiro. Presented by J. P. G. Smith, Esq.

Var.? Tawny, pubescent: head narrower in front, twice the length and breadth of the thorax: eyes and ocelli none: mandibles black, long, curved, acute, not dentated: palpi long, testaceous: antennæ more than half the length of the body, 20-jointed; tips of the joints whitish; joints from the second to the fifth short; the rest rather long: spines of the thorax short, obtuse: abdomen subfusiform, broader than the thorax and nearly twice its length.

a. Rio Janeiro. Presented by J. P. G. Smith, Esq.

Var.? Immature. Testaceous, soft: head short-elliptical, piceous on the disk, full twice the breadth of the thorax: antennæ shorter than the head: thorax without spines: fore border of the prothorax with two lobes: abdomen linear, longer than the thorax. Length of the body 2 lines.

a—*d*. Pará. Presented by J. P. G. Smith, Esq.

T. dirus? Worker? — Tawny, sublinear, pubescent, shining, rather flat: head nearly elliptical, broader and shorter than the thorax: ocelli two, one on each side, near the base of the antenna, far from the eye: mandibles mostly black, each armed with two strong teeth: antennæ shorter than the head: prothorax, mesothorax and metathorax nearly equal in size and shape: abdomen a

little longer but hardly broader than the thorax: fourth joint of the tarsi nearly twice the length of all the other joints. Length of the body 5 lines.

a. ——— ?

10. Termes molestus.

Fuscus; antennis, ore, pedibus corporeque subtus testaceis; fronte puncto impresso ferrugineo; alis pellucidis, costa e vena duplici cornea confecta, fusca. Long. 5½; alar. 12 lin.

Termes fatale, *Perty, Del. Anim. Artic. Braz.* 127, pl. 25, f. 8.
Termes cumulans? *Kollar, Brasiliens Vorzüglich lästige Insecten*, 13, f. 9.
Termes molestus, *Klug, MSS. Burm. Handb. Ent.* ii. 2, 766, 9.
Brazil.

11. Termes testaceus.

Fuscus; antennis, ore, pedibus corporeque subtus testaceis; fronte immaculata; alis fuscis, costa cornea bivenosa. Long. 3; alar. 6 lin.

Hemerobius testaceus, *Linn. Syst. Nat.* i. 2, 912, 8.
Perla fusca, *Deg. Ins.* iii. 367. pl. 27, f. 4, 5.
Termes destructor, *Fabr. Ent. Syst.* ii. 89. *Perty, Del. Anim. Artic. Braz.* 127, pl. 25, f. 9.
Termes destructor? *Illiger, Mag.* iv. 227, 2.
Termes testaceus, *Burm. Handb. Ent.* ii. 2, 767, 10.
Brazil.

T. destructor?—Tawny, pubescent, shining, linear: head piceous, subelliptical, very much longer than broad, depressed in the disk, tawny in front and beneath, nearly as broad as the thorax: ocelli two, one on each side, near the eye: mandibles small, piceous towards the tips: antennæ testaceous, 15-jointed, as long as the head: prothorax twice broader than long, slightly excavated above, straight in front, convex on each side and behind: abdomen testaceous beneath, a little longer than the thorax: legs testaceous; fourth joint of the tarsi much longer than all the other joints: wings gray, fawn-colour on the fore border, full twice the length of

the body; veins tawny; no subcostal transverse veins; longitudinal vein behind the subcostal emitting two branches at two-thirds of its length; discal longitudinal vein emitting about twelve distinct, very oblique, secondary veins. Length of the body 3 lines; of the wings 12 lines.

a, *b*. Honduras, From Mr. Miller's collection.
c. ——— ?

T. destructor ? Soldier.—Tawny, convex, shining, pubescent: head ferruginous, globose, bare, more than twice the breadth of the thorax, tawny beneath, front part produced into a long, porrect, horizontal, acute horn: eyes and ocelli indistinct, or none: palpi and antennæ testaceous: thorax short: abdomen fusiform, much broader and longer than the thorax: legs testaceous, long, slender. Length of the body 1 line.

a. ———? From Mr. Children's collection.

12. Termes morio.

Niger; antennis, ore, pedibus ventreque testaceis; alis nigris, opacis. Long. 2½: alar. 5¼ lin.

Termes morio, *Fabr. Ent. Syst.* ii. 90, 3. *Burm. Handb. Ent.* ii. 2, 767, 11. *Ramb. Hist. Nat. Ins. Neur.* 305, 7.

Cayenne; Porto Rico.

T. Morio ?—Piceous, pubescent, linear, hardly shining, testaceous beneath: head nearly oval, slightly produced and narrower in front, depressed on the disk, tawny towards the mouth, full as broad as the thorax: ocelli two, one on each side near the front of the eye: mandibles with black tips: antennæ testaceous, longer than the head: prothorax nearly twice longer than broad, slightly concave in front, more convex behind, slightly convex and sinuated on each side; a transverse furrow near the fore border, and a longitudinal furrow on the disk: abdomen as broad as the thorax and very much longer; sides and hind borders of the segments testaceous: legs testaceous, slender; fourth joint of the tarsi as long as all the preceding joints: wings gray; veins brown; no transverse veins between the costal and subcostal veins; some very indistinct transverse veins between the latter and the next longitudinal vein, which

emits one or two branches; discal longitudinal vein emitting six secondary veins, three of which are forked. Length of the body 2½ lines; of the wings 10 lines.

a, *b*. Columbia. From Dr. Cuming's collection.

13. Termes lividus.

Pallide testaceus; abdomine supra fusco; alis cinereo-fuscis, costa marginali duplici, in apice summo triplici pallida. Long. 2¾; alar. 6 lin.

Termes lividus, *Burm. Handb. Ent.* ii. 2, 767, 12.

St. Domingo.

14. Termes cingulatus.

Fuscus; ore, antennis, pedibus pectoreque testaceis; abdominis segmentis pallide marginatis; alis infumatis subnitidis, venis omnibus fuscis. Long. 4; alar. 9 lin.

Termes cingulatus, *Klug, MSS. Burm. Handb. Ent.* ii. 2, 767, 13.

South Brazil.

15. Termes flavipes.

Fuscus; ore, tibiis tarsisque pallidis; alis hyalinis, costa marginali duplici fusca, venis discalibus reticulatis. Long. 2; alar. 3 lin.

Hemerobius marginalis, *Rossi, Faun. Etrusc. Ed. Hellw.* ii. 16, 688.

Termes flavipes, *Kollar, MSS. Burm. Handb. Ent.* ii. 2, 768, 14.

South Europe.

16. Termes quadricollis?

Ferrugineus, subtus fulvus, capitis discus piceus; antennæ fulvæ; abdomen thorace latius; pedes fulvi; alæ subfuscescentes.

Termes quadricollis, *Ramb. Hist. Nat. Ins. Neur.* 304, 4.

Ferruginous, pubescent, tawny beneath: head elliptical, longer than broad, a little narrower than the thorax, piceous on the disk, tawny in front: ocelli two, one on each side, between the eyes and close to them: mandibles short, broad: antennæ tawny, mutilated, with less than twenty joints, not longer than the head; joints of equal length: prothorax twice broader than long, slightly concave in front and equally convex behind; sides somewhat rounded: abdomen increasing in breadth from the base to near the tip, broader but not longer than the thorax: legs tawny; fourth joint of the tarsi twice the length of all the preceding joints: wings brownish, slightly opaque and rugulose, brown along the costa, nearly twice the length of the body, indistinctly reticulated; five or six transverse oblique veins in the subcostal space; the other veins pale; secondary veins numerous but indistinct. Length of the body 2½ lines; of the wings 9 lines.

a. ———? From Mr. Children's collection.

17. Termes obesus.

Piceus; pedes fulvi; alæ sordide albidi.

Termes obesus, *Ramb. Hist. Nat. Ins. Neur.* 305, 5.

Bombay.

T. obesus?—Piceous, sublinear, shining, pubescent: head subelliptical, flat between the eyes, very little broader than the thorax: ocelli two, one on each side, near the eye: antennæ a little longer than the head: prothorax twice longer than broad, convex on each side and behind, hardly concave in front: abdomen a little shorter than the thorax: legs tawny; fourth joint of the tarsi twice the length of all the other joints: wings dingy whitish; veins fawn-colour; no distinct transverse subcostal veins; discal longitudinal vein with distinct secondary veins. Length of the body 4½ lines; of the wings 24 lines.

a. North India. From Mr. L. James's collection.
b, c. ———?

T. obesus?—Piceous, sublinear, pubescent, shining, tawny beneath: head tawny in front: ocelli two, one on each side, at some

distance from the eye: mandibles small, with black tips: palpi testaceous: antennæ tawny, 20-jointed, as long as the head: prothorax more than twice broader than long, almost straight in front and behind, convex on each side: abdomen twice the length of the thorax: legs tawny; fourth joint of the tarsi twice the length of all the other joints: wings removed. Length of the body 5 lines.

a. Madras. Presented by Walter Elliot, Esq.

18. Termes Mauricianus.

Rufo-fuscus; prothorax sat magnus; abdomen latum; pedes flavi, tibiis tarsisque gracilibus; alæ latæ, ad costam rufescentes.

Termes Mauricianus, *Ramb. Hist. Nat. Ins. Neur.* 305, 8.

"Size of *T. flavicollis* or a little larger, dull reddish brown, slightly pubescent: head brown, reddish in front: antennæ reddish, a little bristly; joints short: prothorax rather large, dull red, a little narrower behind, where it is rounded and rather strongly notched, a little notched in front: abdomen broad, flat, reddish brown above, reddish beneath: legs yellow; tibiæ and tarsi slender: wings large, a little broader than those of *T. flavicollis;* fore border reddish; veins slightly pubescent; secondary veins moderately distinct; second costal vein emitting some recurrent branches which spread on the disk towards the base; spaces between them microscopically reticulated; costal space without veins."

Isle of France.

T. Mauricianus?—Piceous, pubescent, shining, sublinear, testaceous beneath: head nearly elliptical, rather broad, tawny in front of the eyes, a little broader than the thorax: ocelli two, one on each side, at some distance from the eye: mandibles with black tips: antennæ tawny, not longer than the head: thorax mostly testaceous: abdomen subfusiform, longer and a little broader than the thorax: legs testaceous; fourth joint of the tarsi twice the length of all the other joints: wings gray, with a luteous tinge along the fore border, full twice the length of the body, slightly opaque and rugulose; some transverse veins between the costal and subcostal veins; space behind the subcostal vein towards the tip slightly reticulated with veinlets; secondary veins proceding from

the discal longitudinal vein, and the branches of the longitudinal vein distinct. Length of the body 3½ lines; of the wings 18 lines.

a. East Indies. From Archdeacon Clerk's collection.

19. Termes costatus.

Ferrugineo-flavus; caput ovatum, gutta pallida; prothorax fere semicircularis, capite latius; abdomen supra nigricans, fasciis flavis; alæ subrufescentes, marginibus obscurioribus.

Termes costatus, *Ramb. Hist. Nat. Ins. Neur.* 305, 9.

"Ferruginous-yellow: head oval, moderately large; front rather obscure, with a pale dot: ocelli two: antennæ with the third joint longer than the following joints; fourth shortest; the rest successively increasing in length: maxillary palpi long: first joint of labial palpi very short, last joint longer than the preceding one: prothorax almost semicircular, broader than the head, depressed on each side, slightly notched behind; anterior angles prominent: abdomen blackish above; hind borders of segments yellow: wings pale reddish, darker along the hind border especially towards the base, blackish in front, where the two veins are not ramified; the other veins numerous and distinct; no perceptible reticulation, but some irregular and indistinct veinlets."

Cayenne.

T. costatus?—Piceous, pubescent, nearly linear, tawny beneath: head subelliptical, depressed above, with a red dot between the eyes, tawny in front, hardly broader than the thorax: ocelli two, one on each side, far from the eye: antennæ tawny, longer than the head: prothorax nearly twice broader than long, straight in front, convex on each side and behind, forming two-thirds of a circle: abdomen not longer than the thorax: legs tawny; fourth joint of the tarsi twice the length of all the other joints: wings nearly hyaline, full twice the length of the body, tawny along the fore border; costal and subcostal veins ferruginous; the other veins indistinct. Length of the body 7 lines: of the wings 32 lines.

a, *b*. British Guiana. Presented by Sir. R. Schomburgk.

20. Termes grandis.

Termes grandis, *Ramb. Hist. Nat. Ins. Neur.* 306, 10.
T. fatalis?

Senegal.

21. Termes angustatus.

Termes angustatus, *Ramb. Hist. Nat. Ins. Neur.* 306, 11.
T. viator?

Cape.

22. Termes subhyalinus.

Termes subhyalinus, *Ramb. Hist. Nat. Ins. Neur.* 307, 12.
T. fatalis?

Senegal.

**T. subhyalinus?* Soldier.—Testaceous, smooth, shining, pubescent: head bare, linear, luteous, ferruginous in front, much broader and thicker than the rest of the body and nearly as long, excavated in front, with two porrect, horizontal, acute horns on the fore border: eyes small: ocelli two, one on each side, close to the eye: mandibles long, slender, black, curved, acute, unidentate, more than half the length of the head: palpi long, testaceous: antennæ testaceous, shorter than the head: thorax very short: abdomen about four times the length of the thorax; segments short and of equal size: legs testaceous, rather long and slender; fourth joint of the tarsi twice the length of all the preceding joints. Length of the body 2½ lines.

a, *b*. Sierra Leone. Presented by the Rev. D. F. Morgan.

23. Termes nigricans.

Termes nigricans, *Ramb. Hist. Nat. Ins. Neur.* 308, 14.

Brazil.

24. Termes Rippertii.

Ferrugineus; caput piceum, antice fulvum; antennæ luteæ; abdominis segmenta testaceo marginata; pedes lutei; alæ subcinereæ, costa fusca apice lutea.

Termes Rippertii, *Ramb. Hist. Nat. Ins. Neur.* 308, 15.

Havanah.

Ferruginous, shining, pubescent, nearly linear, luteous beneath: head short-elliptical, piceous, longer than broad, tawny in front, hardly narrower than the thorax: ocelli two, one on each side, close to the eye: antennæ luteous, 15-jointed, a little longer than the head; joints of equal length: prothorax much broader than long, slightly concave in front, convex along the hind border, very convex on each side: abdomen longer and a little broader than the thorax; hind borders of the segments testaceous: legs luteous; fourth joint of the tarsi longer than all the rest together: wings pale gray, slightly opaque; fore border brown, luteous towards the tip; subcostal space with numerous oblique, indistinct, transverse veins; longitudinal vein behind them emitting two branches; discal longitudinal vein emitting nine oblique secondary veins. Length of the body 3 lines; of the wings 16 lines.

a—d. Jamaica. From Mr. Gosse's collection.

25. Termes trinervius.

Termes trinervius, *Ramb. Hist. Nat. Ins. Neur.* 308, 16.

Senegal.

T. trinervius? *Ferrugineus; corpore subtus, prothorace, abdominis segmentorum marginibus pedibusque luteis; antennæ testaceæ; alæ cinereæ, ad costam luteæ.*

Ferruginous, shining, pubescent, linear, luteous beneath: head subelliptical, piceous, very much longer than broad, luteous in front, hardly narrower than the thorax: ocelli two, one on each side, close to the eye: mandibles acute, bidentate, black towards the tips: antennæ testaceous, not longer than the head: prothorax luteous,

twice broader than long, slightly concave along the fore border, convex on each side and behind: abdomen very much longer than the thorax; hind borders of the segments luteous: legs luteous; fourth joint of the tarsi longer than all the preceding joints: wings gray, slightly opaque, luteous along the fore borders; subcostal space with about ten oblique transverse veins; longitudinal vein behind them emitting near its tip three branches, one of which is forked; discal longitudinal vein emitting twelve distinct oblique secondary veins. Length of the body 3½ lines; of the wings 18 lines.

a. Tripoli.

26. Termes dubius.

Rufo-ferrugineus; caput maximum, latum, subquadratum; palpi maxillares mandibulis vix breviores; thorax utrinque trispinosus; abdomen rufo-flavum, pubescens.

Termes dubius, *Ramb. Hist. Nat. Ins. Neur.* 309, 17.
Termes dirus?

Brazil.

27. Termes cephalotes.

Flavus, ferrugineo varius; caput ferrugineum, subquadratum, depressum, thoracis abdominisque longitudine; mandibulæ nigræ non dentatæ; labrum longissimum; antennarum articulus 2us reliquis brevior; abdomen ovatum, flavum, disco obscuriore; pedes pallide flavi.

Termes cephalotes, *Ramb. Hist. Nat. Ins. Neur.* 309, 18.
Termes dirus?

Brazil.

28. Termes insularis.

Fulvus, nitens; pedes pallidiores; alæ limpidæ.

Termes insularis, *White, Zool. Erebus and Terror*, fig. 11.

Tawny, bare, shining, linear, paler beneath: head elliptical, flat above, a little narrower than the thorax: ocelli two, one on

each side, close to the eye: mandibles mostly black; antennæ hardly so long as the head: prothorax twice broader than long, slightly concave in front, slightly sinuated on the hind border, convex on each side: abdomen nearly linear, fully as long and as broad as the thorax: legs pale tawny; fourth joint of the tarsi longer than all the other joints: wings whitish, transparent, nearly twice the length of the body; veins along the fore border tawny; transverse subcostal veins distinct; the other veins colourless but distinct; space between the subcostal vein and the discal vein slightly reticulated; the usual number of secondary veins, those at the base testaceous. Length of the body 3½ lines; of the wings 19 lines.

a, *b*. New Zealand. Presented by Dr. Sinclair.

29. Termes Taprobanes.

Ferrugineus, subtus fulvus; caput antice fulvum, thorace vix latius; pedes fulvi; alæ subcinereæ, ad costam cervinæ.

Ferruginous, sublinear, shining, very pubescent, tawny beneath: head subelliptical, flat between the eyes, tawny in front, hardly broader than the thorax: ocelli rather large, one on each side, near the eye: mandibles with black tips: antennæ ferruginous, tawny at the base, a little longer than the head, with not more than twenty joints: prothorax twice broader than long, convex on each side and behind, slightly concave in front: abdomen sublinear, hardly broader or longer than the thorax: legs tawny; fourth joint of the tarsi twice longer than all the other joints: wings grayish, much more than twice the length of the body; veins and fore border fawn-colour; transverse subcostal veins most distinct towards the tips of the wings; discal longitudinal vein with very distinct transverse secondary veins. Length of the body 5 lines; of the wings 12 lines.

a—*c*. Ceylon. From Mr. Cuming's collection.
d. East Indies. From Archdeacon Clerk's collection.

Female, Queen.—Head wanting: thorax piceous, pubescent, shining, partly ferruginous: prothorax small, full twice broader than long, narrower behind; fore border almost straight; sides and hind border convex; abdomen dull ferruginous, tuberculated,

cylindrical; segments closely anchylosed: legs very short and slender. Length of the thorax 1 line; of the abdomen 23 lines.

a. Ceylon. From Mr. Cuming's collection.

30. Termes lateralis.

Piceus, gracilis, linearis, subtus, antennis pedibusque fulvis; caput antice fulvum, thorace paullo latius; alæ fuscæ.

Piceous, slender, linear, shining, minutely pubescent, tawny beneath: head subelliptical, much longer than broad, depressed on the disk, tawny in front, a little broader than the thorax: ocelli two, small, one on each side, near the eye: mandibles small, acute, piceous towards the tips: antennæ tawny: prothorax scutcheon-shaped, nearly twice broader than long, very slightly concave in front, convex and narrower behind: abdomen hardly longer than the thorax: legs tawny: wings brown, full twice the length of the body; veins brown; transverse veins along the subcostal space numerous and oblique, very indistinct; discal longitudinal vein emitting about nine oblique secondary veins, two of them forked. Length of the body 1¼ line; of the wings 6½ lines.

a. Sierra Leone. Presented by the Rev. S. F. Morgan.

31. Termes anticus.

Fulvus, subtus, antennis pedibusque testaceis; caput antice testaceum; alæ albidæ, ad costam testaceæ.

Female.—Tawny, pubescent, testaceous beneath: head a little longer than broad, as broad as the thorax, testaceous in front: ocelli two, one on each side, between the eyes and close to them: mandibles short: antennæ testaceous, a little longer than the head, with less than twenty joints; joints increasing in length towards the tips: prothorax subquadrate, a little broader than long: abdomen sublinear, a little broader and shorter than the thorax: legs testaceous; fourth joint of the tarsi longer than the three preceding joints: wings whitish, finely rugulose, twice the length of the body; veins along the costa tawny and including a testaceous space; the other veins white and very indistinct; about twelve nearly upright transverse veins and about fifteen secondary veins. Length of the body 3 lines; of the wings 9 lines.

a. Honduras. From Mr. Miller's collection.

32. Termes indecisus.

Fulvus, subtus, antennis pedibusque testaceis; alæ limpidæ.

Tawny, sublinear, pubescent, shining, testaceous beneath: head elliptical, depressed above, with a slight longitudinal furrow in front, testaceous towards the mouth, as broad as the thorax: ocelli two, one on each side, close to the eye: mandibles with black tips: antennæ pale testaceous, not longer than the head: prothorax nearly twice broader than long, slightly concave in front, convex behind and on each side: abdomen broader but hardly longer than the thorax, slightly increasing in breadth towards the tip: legs pale testaceous; fourth joint of the tarsi as long as all the preceding joints: wings limpid, full twice the length of the body; costal and subcostal veins testaceous; all the other veins colourless and very indistinct. Length of the body 2 lines; of the wings 9 lines.

a. Columbia. From Dr. Cuming's collection.

33. Termes brevis.

Fulvus, linearis, subtus pedibusque testaceis; abdomen supra piceum; alæ albo-limpidæ.

Tawny, shining, linear, testaceous beneath: head nearly elliptical, very much longer than broad, slightly depressed on the disk, as broad as the thorax: ocelli two, one on each side, close to the eye: antennæ tawny, not longer than the head; joints of equal length: prothorax twice broader than long, very slightly concave in front, equally convex behind, convex on each side: abdomen linear, piceous above, a little longer but not broader than the thorax: legs pale testaceous; fourth joint of the tarsi a little longer than all the preceding joints: wings whitish, limpid, full twice longer than the body; costal and subcostal veins tawny; subcostal vein very near the costal, with eight oblique transverse veins between them; all the other veins colourless and very indistinct. Length of the body 2 lines; of the wings 8 lines.

a, *b*. Jamaica. From Mr. Gosse's collection.

34. Termes fumipennis.

Piceus, subtus, antennis pedibusque fulvis; caput antice fulvum; abdomen subtus luteum; alæ fuscæ.

Piceous, pubescent, shining, nearly linear, tawny beneath: head nearly elliptical, very much longer than broad, depressed on the disk, tawny in front, as broad as the thorax: ocelli two, one on each side, close to the eye: mandibles with black tips: antennæ tawny, a little longer than the head; joints of nearly equal length: prothorax nearly twice broader than long, concave in front, convex behind, slightly convex on each side: abdomen fusiform, luteous beneath, a little longer and broader than the thorax: legs tawny; tibiæ darker than the femora; fourth joint of the tarsi nearly twice the length of all the preceding joints: wings brown, more than twice the length of the body; veins brown, no transverse veins between the costal and subcostal, but numerous indistinct, transverse, oblique veins between the latter and the next longitudinal vein which emits two branches: discal longitudinal vein with twelve secondary veins. Length of the body 2½ lines; of the wings 12 lines.

a, b. New Holland. Presented by the Entomological Club.

35. Termes australis.

Testaceus; caput supra ferrugineum; alæ sublimpidæ.

Testaceous, pubescent: head longer than broad, as broad as the thorax, ferruginous above except in front, and a slight stripe on the disk: ocelli two, one on each side, between the front of the eyes and close to them: mandibles piceous towards the tips, with two acute teeth: antennæ with less than twenty joints, not longer than the head; joints increasing in length towards the tips: prothorax subquadrate, nearly linear, almost twice broader than long: abdomen subelliptical, a little broader and longer than the thorax: legs rather stout; fourth joint of the tarsi twice the length of all the preceding joints: wings sublimpid, twice the length of the body; costal and subcostal veins pale testaceous; the other veins very indistinct; no transverse oblique veins in front. Length of the body 3 lines; of the wings 10 lines.

a. Adelaide. Presented by the Entomological Club.
b. New Holland. Presented by the Haslar Hospital.

T. australis?—Testaceous, pubescent, shining: head tawny, ferruginous in front, broader and longer than the thorax: eyes and ocelli none: mandibles black, stout, curved, acute, with a tooth near the base: antennæ with about twenty-three short joints, much shorter than the head: prothorax somewhat obconical, slightly convex in front, very convex along the hind border: mesothorax and metathorax very short: abdomen slightly decreasing in breadth from the base to the tip, a little longer than the thorax: legs of moderate length; fourth joint of the tarsi full twice the length of all the other joints. Length of the body 4 lines.

a. New Holland. Presented by the Haslar Hospital.

T. australis?—Testaceous, pubescent, shining: head elliptical, tawny, depressed above, ferruginous in front, longer and broader than the thorax: eyes and ocelli none: mandibles black, stout, nearly straight, with hooked tips, armed with two broad teeth: antennæ tawny, shorter than the head; joints with whitish tips, successively decreasing in length: prothorax full twice broader than long; fore border slightly concave; sides and hind border convex: abdomen subfusiform, a little broader and longer than the thorax: legs rather stout; fourth joint of the tarsi more than twice the length of all the other joints. Length of the body 3 lines.

a. Van Dieman's Land. From Dr. Hooker's collection.

T. australis? Immature.—Testaceous, pubescent, shining: head short-elliptical, depressed on the disk, blackish on each side between the antennæ and behind the clypeus: eyes and ocelli none: antennæ shorter than the head; joints very short: prothorax full twice broader than long, hardly concave in front, convex behind and on each side: abdomen longer than the thorax: fourth joint of the tarsi full twice the length of all the other joints. Length of the body 3 lines.

a. New Holland. Presented by the Haslar Hospital.

T. australis? Immature.—Testaceous, like the last: head narrower, with a piceous spot on each side between the antennæ which are almost as long as the head: abdomen subfusiform, very much broader and longer than the thorax. Length of the body 3 lines.

a. Van Dieman's Land. From Dr. Hooker's collection.

36. Termes obscurus.

Ferrugineus; caput antice fulvum; antennæ testaceæ; pedes fulvi; alæ sordide albidi.

Ferruginous, pubescent, sublinear: head elliptical, much longer than broad, tawny in front, a little narrower than the thorax: ocelli two, small, one close to the eye on each side: mandibles small: antennæ testaceous, mutilated, not longer than the head? joints of nearly equal length: prothorax very much broader than long, slightly concave in front, equally convex behind, hardly rounded on each side: abdomen linear, rounded at the tip, shorter than the thorax: legs tawny: wings dingy white, slightly rugulose and opaque; costal and subcostal veins tawny, a few very oblique transverse veins between them; the other veins whitish, few and indistinct. Length of the body 2½ lines; of the wings 7 lines.

a. Swan River. Presented by Sir John Richardson.

37. Termes convexus.

Ferrugineus; subtus, abdomen, antennis pedibusque fulvis; alæ subfuscæ.

Ferruginous, smooth, shining, linear, pubescent, tawny beneath: head elliptical, much longer than broad, tawny about the mouth, hardly narrower than the thorax: ocelli two, small, one close to the eye on each side: mandibles small, bidentate, black towards the tips: antennæ tawny, shorter than the head, with about thirteen joints: prothorax with an indistinct discal furrow, very much broader than long, slightly concave in front, almost straight behind, convex on each side: abdomen hardly longer than the thorax: legs tawny; fourth joint of the tarsi as long as all the preceding joints: wings pale brown, slightly rugulose and opaque; costal and subcostal veins ferruginous, with about twelve oblique transverse veins between them; the other veins very pale and indistinct, with rows of punctures between them and along them; about twelve secondary oblique veins proceeding to the hind border. Length of the body 1½ line; of the wings 5 lines.

a. Van Dieman's Land. From Mr. A. J. Smith's collection.

38. Termes Guatimalæ.

Ferrugineus, subtus testaceus; prothorax rufescens; pedes testacei.

Ferruginous, sublinear, very pubescent, shining, testaceous beneath: head elliptical, flat above: ocelli two, one on each side, close to the eye: mandibles small: antennæ 20-jointed? fully as long as the head: prothorax reddish, nearly twice broader than long, very concave in front, slightly convex on each side, straight behind: abdomen a little longer than the thorax: legs testaceous; fourth joint of the tarsi nearly twice the length of all the other joints: wings removed. Length of the body 3 lines.

a. Guatimala. From M. Deby's collection.

39. Termes Mexicanus.

Fulvus; subtus, antennis pedibusque testaceis; alæ hyalinæ.

Tawny, slender, linear, shining, thinly pubescent, testaceous beneath: head short-elliptical, with a slight longitudinal furrow, depressed between the eyes, as broad as the thorax: clypeus convex along the hind border: ocelli two, one on each side, near the eye: palpi short, testaceous: antennæ testaceous, 18-jointed, much shorter than the head; first, second, and third joints of moderate length; the rest very short: prothorax subquadrate, much broader than long, with a slight longitudinal furrow in front; sides nearly straight: abdomen longer than the thorax: legs testaceous, short and stout: fourth joint of the tarsi longer than all the preceding joints: wings hyaline, nearly twice the length of the body; veins along the fore border testaceous, with a few ramifications towards the tips; the other veins very indistinct. Length of the body 4½ lines; of the wings 14 lines.

a. Mexico. Presented by E. P. Coffin, Esq.

40. Termes pusillus.

Piceus; caput antice testaceum; tarsi testacei; alæ subhyalinæ.

Piceous, sublinear, pubescent, shining: head elliptical, depressed above, testaceous in front, as broad as the thorax: eyes

small: ocelli none? prothorax more than twice broader than long, a little impressed in front, slightly convex on each side: abdomen a little broader but not longer than the thorax: tarsi testaceous; fourth joint twice the length of all the other joints: wings subhyaline, minutely rugulose, twice the length of the body; costal and subcostal veins testaceous; the other veins almost obsolete. Length of the body 2 lines; of the wings 9 lines.

a. ——— ?

41. Termes occidentis.

Fulvus, latus, linearis; caput crassum; pedes validi.

Tawny, linear, very broad, pubescent, shining: head subelliptical, very thick, full as broad and as long as the thorax, depressed on the disk, with a tooth on each side in front near the base of the antenna: eyes very small: ocelli none: mandibles black, stout, long, slightly curved, bidentate: prothorax more than twice broader than long, narrower behind, very concave along the front, hardly convex on each side and behind: abdomen short: legs very thick; fourth joint of the tarsi full twice the length of all the other joints: wings rudimentary. Length of the body 5 lines.

a, *b*. West Coast of America. Presented by Captain Wood and Lieut. Wood.

Genus 2. EMBIA.

Labium profunde bifidum, palpis 3-articulatis instructum. Antennæ 17-articulatæ. Tarsi 3-articulati, articulo 1o maximo. Alarum venæ omnes corneæ, venis recurrentibus inter se junctæ.

Embia, *Latr.*; *Westw.*; *Burm.*; *Blanch.*; *Ramb.*

1. Embia Savignyi.

Testacea; alæ fuscæ, albo striatæ. Long. 4½ lin.

Embia ———, *Descript. de l'Egypte, Neur.* pl. 2, f. 9, 10.
Embia Savignyi, *Westw. Trans. Linn. Soc.* xvii. 372, pl. 2, f. 1. *Burm. Handb. Ent.* ii. 770. *Ramb. Hist. Nat. Ins. Neur.* 311, 1.
Embia Ægyptiaca, *Blanch. Hist. Nat. Ins.* 48.

a, *b*. Egypt. Presented by C. Lamb, Esq.

2. Embia Latreillii.

Oligotoma Saundersii, *Westw.* ?
Embia Latreillii, *Ramb. Hist. Nat. Ins. Neur.* 312, 2.

Bombay; Isle of France; Madagascar.

E. Latreillii? *Ferrugineus, gracilis, pubescens; prothorax sulcatus; pedes testacei, femoribus tibiisque latis; alæ subfuscæ, albido strigatæ.*

Pale ferruginous, slender, pubescent, like a *Raphidia*, and may serve as a connecting link thereto from the *Termitina:* head subfusiform, broader than the thorax: eyes with large facets: ocelli none: mandibles testaceous, short, tridentate: palpi short: antennæ very pubescent: prothorax longer than broad, nearly obconical, with a slight longitudinal furrow: abdomen linear, shorter than the thorax, with two short articulated filaments at the tip: legs testaceous, rather short; femora and tibiæ broad: wings pale brown with whitish streaks, a little shorter than the body; veins pubescent, much like those of *Olyntha Brasiliensis*, in structure. Length of the body 2¼ lines; of the wings 4½ lines.

a. ———? From Mr. Children's collection.

3. Embia Klugi.

Ferrugineo-fusca; abdominis setæ sat longæ; pedes dilatati.

Embia Klugi, *Ramb. Hist. Nat. Ins. Neur.* 313, 3.

Ferruginous-brown, nearly the size of *E. Savignyi:* head ovate; hind part moderately contracted: prothorax narrower than the head, narrower in front, with a transverse furrow before its fore border: abdominal appendages rather long; last joint longer than the first: legs dilated.

Brazil.

4. Embia Solieri.

Ferrugineo-fusca, E. Savignyi *minor; tarsorum articulus* 1us *minus dilatatus et arcuatus.*

Embia Solieri, *Ramb. Hist. Nat. Ins. Neur.* 313, 4.

"Larva.—Ferruginous-brown, a little smaller than *E. Savignyi*: head smaller, more depressed, almost quadrate: antennæ with shorter joints: prothorax narrower than the head, with a furrow before the middle, hardly sinuated on each side: metathorax larger than the prothorax, or than the mesothorax: first joint less dilated and curved than that of *E. Savignyi*, and of a different form."

South France.

Genus 3. OLIGOTOMA.

Labium profunde bifidum, palpis 3-articulatis instructum. Antennæ 11-articulatæ. Tarsi 3-articulati, articulo 1o maximo. Alarum venæ omnes corneæ, venis recurrentibus inter se junctæ.

Oligotoma, *Westw. Linn. Trans.* xvii. 369; *Burm.*

1. Oligotoma Saundersii.

Testaceo-fuscescens, segmentis abdominalibus pallide marginatis; alarum areolæ albido vittatæ. Long. 3¼ lin.

Oligotoma Saundersii, *Westw. Trans. Linn. Soc.* xvii. 373, pl. 2, f. 2. *Burm. Handb. Ent.* ii. 2, 770.

Bengal.

Genus 4. OLYNTHA.

Labium profunde bifidum, palpis 3-articulatis instructum. Antennæ 30-articulatæ. Tarsi 3-articulati, articulo 1o maximo. Alarum venæ omnes corneæ, venis recurrentibus inter se junctæ.

Olyntha, *Gray, Griff. Anim. Kingd.* xv.; *Westw.; Burm.*

1. Olyntha Brasiliensis.

Piceo-nigra; prothorace femoribusque anterioribus ochraceis; antennæ apice albæ; alæ albo vittatæ, cercis flavis. Long. 7¼ lin.

Olyntha Brasiliensis, *Gray, Griff. Anim. Kingd.* xv. 347, pl. 72, f. 2. *Westw. Trans. Linn. Soc.* xvii. 373, pl. 2, f. 3. *Burm. Handb. Ent.* ii. 2, 770, 1.

a. Brazil. From Mr. Children's collection.

2. Olyntha ruficapilla.

Fusca; capite et prothorace rufis; alæ albo striatæ, cercis fuscis. Long. 3½ lin.

Olyntha ruficapilla, *Burm. Handb. Ent.* ii. 2, 770, 2.

Brazil.

3. Olyntha staphilinoides.

Piceus, testaceo varius; caput antice ferrugineum; pedes testacei, femoribus piceo strigatis.

Larva?—Piceous, sublinear, slender, flat, dull, pubescent: head somewhat conical, ferruginous in front, not longer than broad, much broader than the thorax; a transverse suture between the eyes forms a very obtuse angle, from whence a longitudinal suture proceeds to the hind border: clypeus pale brown, shining; eyes of moderate size: ocelli none: palpi brown: antennæ mutilated;

first joint broad: prothorax slightly conical, not broader than long; borders and dorsal stripe testaceous: mesothorax and metathorax each as large as the prothorax; mesothorax partly testaceous: abdomen linear, not broader or longer than the thorax, with a short, broad, testaceous stripe on the disk: legs testaceous; femora with piceous streaks. Length of the body 5½ lines.

The broader head of this species and the shape of its prothorax distinguish it from *O. Brasiliensis*.

a. Brazil. From Mr. Stevens' collection.

Sub-order 5. EPHEMERINÆ.

Partes oris obliteratæ, subnullæ. Abdominis apex bi- vel tri-setus. Tarsi 4-5-articulati. Alæ duo vel quatuor, inæquales, homonomæ, membranaceæ, venis transversis plurimis. Larvæ aquaticæ, branchiopneustæ, nudæ.

Ephemerinæ, *Latr.; Pictet; Blanchard.*
Ephemera, *Linn.; Fabr.; Deg.; Barb.; Gmel.; Berk.; Stew.; Turt.; Panz.*
Agnatha, *Cuvier.*
Ephemeridæ, *Leach; Steph.; Curt.; Westw.*
Biomorphotica, p., *Westw.*
Arkiptera, p., *Brullé; Delaporte.*
Ephemerina, *Newman.*

"Antennæ very short, 3-jointed; terminal joint longest, and a mere seta. Ocelli three. Mouth and prothorax atrophied. Abdomen terminating in long caudal multiarticulate setæ. Legs simple; fore-legs longer and porrected in the males. Wings much reticulated with veins, very unequal in size, the fore-wings being ample, the hind small, and sometimes totally wanting; when at rest they are erect and meet vertically over the back. *Larva.*—Aquatic, breathes by means of external gills, which also serve as organs of natatory locomotion. Antennæ long, filiform, multiarticulate. Mandibles corneous, small, feeble. Setæ long, filiform, multiarticulate. Legs long and strong. Frequents the bottom of ponds, and especially of running streams, secretes itself under stones, and appears to feed on the decomposing organic matter which mingles so largely in the sediment of all waters. *Pupa.*—Similar to the

larva in form, habit and food. Rudiments of wings very perceptible at the posterior angles of the wing-bearing segments. Attains its perfect state by a double ecdysis; after the first, the insect retains the soft, silky pellicle which invests a great number of insects, and which, in all other cases, is shed with the pupa-case. After a feeble flight the insect settles, and in the course of a few hours divests itself of the pellicle, and has then accomplished all its transformations."—*Newman.*

Genus 1. EPHEMERA.

Oculi remoti, maris simplices. Pedes bene determinati. Setæ caudales tres, æquales. Alæ reticulatæ, quatuor, venis plurimis transversis. Larva subiens, instrumentis respiratoriis quasi amentales.

Ephemera, *Linn., &c.*
Ephemeræ trisetæ, p., *Zett.*
Ephemeridæ, p., *Newman.*

Eyes simple in both sexes, always separated by a broad interval: wings four, with numerous cross-veins; hind-wings almost as long as one-fourth of the fore-wings, with a complete neuration and an angular costal border: abdominal tentaculæ of middle size; internal appendages hidden, very small: three tail-bristles of equal length.

1. Ephemera vulgata.

Obscure fusca; abdomen lutescens; setæ caudales nigricantes; pedes pallidi, obscure nebulosi; alæ fuscescentes, anticæ costa pallida fusca, maculis tribus vel quatuor, posticæ maris macula media.

Ephemera vulgata, *Linn. Syst. Nat. Ed.* 12, ii. 906, 1. *Fauna Suecica*, 1472, 1. *Geoffr. Hist. Ins.* ii. 238, 1. *Scop. Ent. Carn.* 264, 683. *Schæff. Elem.* pl. 72. *Deg. Ins.* ii. 621, pl. 16. *Müll. Prod. Zool. Dan.* 142, 1641. *Sulz. Ins.* fig. 103. *Mus. Lesk.* i. 50, 13. *Schrank, Ins. Austr.* 602; *Faun. Boic.* 1937. *Gmel. Ed. Syst. Nat.* i. 5, 2678, 1. *Barbut, Gen.* 213,

pl. 11, fig. inf. dext.? *Fourcroy, Ent. Par.* 351, 1. *De Vill. Linn. Ent.* iii. 16, 1. *Berk. Syn. Nat. Hist.* i. 150. *Rossi, Faun. Etrusc.* ii. 672. *Oliv. Enc. Méth.* vi. 417, 1. *Stew. Elem. Nat. Hist.* ii. 211. *Shaw, Gen. Zool.* vi. 249, pl. 81, fig. sup. *Fabr. Ent. Syst.* ii. 68, 1. *Panz. Faun. Ins. Germ.* xciv. fig. 16. *Cederhielm, Faun. Ingr. Prod.* 134, 407. *Turt. Syst. Nat.* iii. 393. *Walcken. Faun. Par.* ii. 8, 1. *Latr. Hist. Nat. Ins.* xiii. 94, 1. *Wood, Ill. Linn. Gen. Ins.* ii. 23, pl. 47. *Duméril, Cons. Gen. Ins.* pl. 28, f. 4, 5. *Sam. Ent. Comp.* pl. 7, f. 2. *Zett. Ins. Lap.* 1044. *Steph. Ill. Brit. Ent. Mand.* vi. 55, 1. *Burm. Handb. Ent.* ii. 804, 1. *Blanch. Hist. Nat. Ins.* iii. 53, 1. *Ramb. Hist. Nat. Ins. Neur.* 293, 1. *Westw. Intr. Class. Ins.* ii. 25, 61, 1—16. *Pictet, Hist. Nat. Ins. Neur. Eph.* 126, 1, pl. 1—5. *Ramb. Hist. Nat. Ins. Neur.* 293, 1.

a—*c*. England.

Var. ? Ephemera hispanica, *Ramb. Hist. Nat. Ins. Neur.* 294.

"A little smaller than *E. vulgata*, which it resembles: thorax black: abdomen yellow, spotted with black: filaments reddish with brown rings, very long: anal appendages much attenuated at the tip, with the two last joints longer and more slender than in *E. vulgata*, but not suddenly contracted at the base of the penultimate as in *E. lutea*: legs blackish, a little shorter than those of *E. lutea*: wings slightly reddish, almost hyaline; almost all the veins bordered with brown, with which the spots of the middle are confluent."

Madrid.

2. Ephemera Danica.

Oculi fusci; thorax maris nigricans; setæ caudales fulvæ, fusco annulatæ; alæ anticæ maculis tribus vel quatuor, posticæ immaculatæ.

Ephemera Danica, *Müll. Faun. Fridr.* 554; *Syst. Ins.* pl. 9, f. 5, 6. *Prod. Zool. Dan.* 142, 1640. *De Vill. Linn. Ent.* iii. 18, 6. *Schæff. Icon. Ins. Ratisb.* pl. 9, f. 5, 6. *Pictet, Hist. Nat. Neur. Eph.* 130, 2, pl. 7.

Ephemera vulgata? *Donovan, Nat. Hist. Brit. Ins.* iv. 53, pl. 128.

Ephemera maculata, *De Vill. Linn. Ent.* iii. 22, 17.

Ephemera cognata, *Steph. Ill. Brit. Ent. Mand.* vi. 516, 2. *Curt. Brit. Ent.* 708.

a, *b*. England.

3. Ephemera glaucops.

Oculi cyanei; thorax maris flavus; setæ caudales fulvæ, fusco annulatæ; alæ anticæ maculis tribus vel quatuor, posticæ immaculatæ.

Ephemera lutea, *Sulz. Ins.* 171, pl. 24, f. 6. *Burm. Handb. Ent.* ii. 804, 2.

Ephemera glaucops, *Pictet, Hist. Nat. Neur. Eph.* 132, 3, pl. 8, f. 1—3.

Europe.

Var.? Ephemera flavicans, *Ramb. Hist. Nat. Ins. Neur.* 296, 7.

"A little larger than *Cloeon Diptera:* yellow: abdomen dull red above, darker on the borders of the segments: filaments three, red, twice the length of the body, with brown rings; anal appendages horn-shaped, long, slender, contiguous at the tip and forming an oval by their reunion: legs yellow; anterior legs long, reddish, almost as long as the body, with red rings at the tips of the thighs, and with brown rings on the other joints: wings large, hyaline, very slightly yellowish, a little darker along the fore border; veins yellow; transverse veinlets brownish. Female paler than the male."

France.

4. Ephemera guttulata.

Alæ anticæ confertim maculatæ.

Ephemera guttulata, *Pictet, Hist. Nat. Neur. Eph.* 135, pl. 8, f. 4.

Switzerland.

5. Ephemera simulans.

Picea; setæ pubescentes, corpore longiores; pedes fulvi, antice obscuriores; alæ subcinereæ, anticæ fusco maculatæ et subfasciatæ, venis nebulosis.

Piceous: abdomen more than twice the length of the thorax: setæ pale piceous, pubescent, longer than the body: legs dull tawny; fore-legs darker: wings grayish; veins black, clouded except towards the tips and along the hind border with brown, which forms in the disk a spot at one-third of the length, another at two-thirds of the length, and an interrupted band between them. Length of the body 5 lines; of the setæ 6 lines; of the wings 14 lines.

a. River St. Lawrence. Presented by the Entomological Club.

6. Ephemera Colombiæ.

Fulva; antennæ fuscæ; thorax testaceo notatus; abdomen luteum, nigro fasciatum et bivittatum; setæ fuscæ, corpore duplo longiores; pedes fulvi; alæ albidæ, venis testaceis.

Subimago.—Tawny: antennæ brown: thorax with some testaceous marks: abdomen luteous, about twice the length of the thorax, with two black stripes, and with a black band on the hind border of each segment: setæ brown, about twice the length of the body: legs tawny: wings whitish; veins testaceous. Length of the body 4½ lines; of the setæ 9 lines; of the wings 16 lines.

a. Columbia. From Dr. Cuming's collection.

7. Ephemera decora.

Picea; antennæ nigræ, basi fulvæ; abdomen ferrugineo varium; setæ testaceæ, fusco fasciatæ, corpore multo longiores; pedes testacei, antici picei; alæ hyalinæ, fusco maculatæ et apud venas nebulosæ.

Piceous: antennæ black, tawny at the base: abdomen rather more than twice the length of the thorax, partly ferruginous on the disk and about the borders of the segments: setæ testaceous with brown bands on the sutures of the joints, much longer than the body: legs pale testaceous; fore-legs piceous: wings hyaline; veins black, and with the exception of those at the tips and along the hind border deeply clouded with brown which forms a few spots in each disk. Length of the body 5½ lines; of the setæ 12? lines; of the wings 13 lines.

a. Canada. Presented by Dr. Barnston.

8. Ephemera hebes.

Picea; antennæ nigræ; setæ fusco-testaceæ; pedes testacei, antici fusci; alæ cinereæ, venis nigris.

Subimago, Fem.—Dull piceous: antennæ black: abdomen more than twice the length of the thorax: setæ brownish testaceous, mutilated: legs dull testaceous; fore-legs brown: wings gray; veins black, not strongly marked. Length of the body 4 lines; of the wings 10 lines.

a. Newfoundland. Presented by W. C. St. John, Esq.

9. Ephemera australis, Mas.

Picea; vertice antennisque nigris; thoracis latera flavo maculata; abdomen rufum; setæ fulvæ, corpore plus duplo longiores; pedes fulvi, antici fusci; alæ limpidæ, costa apicali fusca. Subimago? *Ferrugineo-fusca; setæ corpore longiores; alæ anticæ fusco bifasciatæ.*

Male.—Piceous: head black above: antennæ black: thorax with yellow spots on each side: abdomen red, paler beneath, hardly twice the length of the thorax: setæ tawny, much more than twice the length of the body: legs tawny; fore-legs brown: wings limpid; veins black, very slender: fore border of the fore-wings brown along one-third of the length from the tip. Length of the body 4 lines; of the setæ 11 lines; of the wings 9 lines.

a—d. Van Dieman's Land. From Dr. Hooker's collection.

Subimago?—Ferruginous-brown; borders of the segments paler: antennæ black: abdomen full twice the length of the thorax: setæ longer than the body: wings limpid; veins black, clouded with brown: fore-wings with two broad, irregular, interrupted, and very oblique bands. Length of the body 3 lines; of the setæ 6 lines; of the wings 9 lines.

a—d. Van Dieman's Land. From Dr. Hooker's collection.

Genus 2. POTAMANTHUS.

Oculi maris duplices. Pedes bene determinati. Setæ caudales tres. Alæ reticulatæ, quatuor, venis transversis plurimis. Larva non depressa, repens, non subiens, cauda simplici.

Potamanthus, *Pictet, Hist. Nat. Neur. Eph.* 197.
Ephemera, p., *Steph.*
Ephemeræ trisetæ, p., *Zett.*
Ephemeridæ, p., *Newman.*

Each of the ordinary eyes of the male surmounted by a large reticulated eye, whose superior border rests against the front eye: wings four, with numerous transverse veins, which are delicate, and often invisible to the unaided eye: hind-wings smaller than those of the three preceding genera, but with a complete neuration: abdominal tentaculæ of middle size; internal appendages conical, of moderate size: three tail-bristles of equal length.

1. POTAMANTHUS FERRERI.

Corpus læte flavum; setæ caudales non annulatæ; alæ distinctissime reticulatæ, venis transversis pallidis.

Potamanthus Ferreri, *Pictet, Hist. Nat. Neur. Eph.* 203, pl. 25, f. 1.
Switzerland.

2. POTAMANTHUS LUTEUS.

Corpus læte flavum; setæ caudales annulatæ; alæ distinctissime reticulatæ, venis transversis fuscescentibus.

Ephemera lutea, *Linn. Syst. Nat. Ed.* 12, ii. 906, 2. *Geoffr. Hist. Ins.* ii. 239, 2. *Schæff. Icon. Ins. Ratisb.* 42, f. 7? *Sulz. Abg. Gesch.* 171, pl. 24, f. 6. *Fabr. Ent. Syst.* ii. 68, 2. *Gmel. Ed. Syst. Nat.* i. 2628, 2. *Schrank, Ins. Austr.* 603; *Faun. Boic.* 1939. *De Vill. Linn. Ent.* iii. 17, 2. *Rossi, Faun. Etrusc.* ii. 673. *Oliv. Enc. Méth.* vi. 417, 2. *Walck. Ent. Par.* ii. 8, 2. *Latr. Hist. Nat. Ins.* xiii. 95, 2.

Turt. Syst. Nat. iii. 393. *Blanch. Hist. Nat.* iii. 54, 1. *Steph. Ill. Brit. Ent. Mand.* vi. 57, 5. *Ramb. Hist. Nat. Ins. Neur.* 294, 2.
Ephemera hyalinata, *Panz. explicat. Schæff. tabul.*
Baëtis marginalis? *Burm. Handb. Ent.* ii. 801, 3.
Potamanthus luteus, *Pictet, Hist. Nat. Neur. Eph.* 2052.

a. England. Presented by F. Walker, Esq.

Subimago? Ephemera chloretica, *Ramb. Hist. Nat. Ins. Neur.* 296, 9.

A little larger than *Cloeon Diptera*, resembling *E. flavicans*, R.: yellow, with a dull red band on the dorsal part of the abdomen beneath, red on the prothorax: filaments three, longer by half than the body, dull, with blackish rings, slightly downy: anal appendages rather thick, moderately attenuated and tapering at the tips: legs yellow, much shorter than the body; feet 4-jointed, with indistinct brownish rings; anterior legs slightly reddish: wings very slightly yellowish, a little more tinged at the base and along the fore border; reticulation yellowish; membrane slightly opaque.
Paris.

3. Potamanthus marginatus.

Corpus obscurum; alæ indistincte reticulatæ, regione subcostali nigricante.

Ephemera marginata, *Linn. Syst. Nat. Ed.* 12, ii. 906, 3. *Geoffr. Hist. Ins.* ii. 239, 3. *Müll. Zool. Dan. Prodr.* 142, 1642. *De Vill. Linn. Ent.* iii. 17, 3. *Oliv. Enc. Méth.* vi. 417, 3. *Fabr. Ent. Syst.* ii. 69, 4. *Cederhielm, Faun. Ingr. Prod.* 134, 408. *Schrank, Faun. Boic.* 1941. *Stew. Elem. Nat. Hist.* ii. 211? *Shaw, Gen. Zool.* vi. pl. 81, fig. inf.? *Walck. Faun. Par.* ii. 8, 3. *Latr. Hist. Nat. Ins.* xiii. 95, 3. *Steph. Ill. Brit. Ent. Mand.* vi. 57, 6. *Blanch. Cours Hist. Nat.* iii. 54, 3.
Ephemera procellaria, *Roesel, Ins.* ii. pl. 12, f. 1, 2.
Ephemera viridescens, *Fourcr. Ent. Par.* 351, 3.
Potamanthus marginatus, *Pictet, Hist. Nat. Neur. Eph.* 208, 3, pl. 25, f. 4, 5.

a. England. Presented by F. Walker, Esq.
b. England.

Var.? Ephemera rufa, *Ramb. Hist. Nat. Ins. Neur.* 296, 8.

A little larger than *Cloeon Diptera:* red: body thick, rather short, rather dark red above: eyes very prominent on the outer side: filaments three, blackish: legs rather dark red, perceptibly shorter than the body, with 5-jointed tarsi; anterior legs brownish: wings hyaline, long, hardly broad, yellowish at the base and along the fore border; reticulation brownish, tolerably distinct; veins yellow towards the base.

Tarbes.

4. Potamanthus Geerii.

Corpus longum, plerumque nigro-fuscum; mesothorax non vittatus; setæ caudales fuscæ; pedes violaceo-fusci; alæ indistincte reticulatæ, regione subcostali vix colorata; alæ subimaginis maculatæ.

Ephemera vespertina, *Linn. Syst. Nat.* ii. 906. *Deg. Ins.* ii. 646, pl. 17, f. 11—16. *Berk. Syn.* i. 150. *Stew. El. Nat. Hist.* ii. 211. *Zett. Ins. Lap.* 1044, 5.
Ephemera albipennis, *Retz. Gen. de Deg.* 57, 181.
Baëtis fusa, *Burm. Handb. Ent.* ii. 800, 1.
Leptophlebia, *Westw. Intr. Class. Ins.* ii. 31.
Potamanthus Geerii, *Pictet, Hist. Nat. Neur. Eph.* 211, 4, pl. 26, f. 1—3.

Europe.

5. Potamanthus talcosus.

Piceo-fuscus; abdominis apice pedibus setisque luridis; alis hyalinis immaculatis.

Ephemera talcosa, *Steph. Ill. Brit. Ent. Mand.* vi. 57, 4.
Potamanthus talcosus, *Pictet, Hist. Nat. Neur. Eph.* 234.

England.

6. Potamanthus stigma.

Piceo-fuscus; abdomine pallidiore; pedibus setisque luridis immaculatis; alis hyalinis pallide lutescentibus haud maculatis, anticarum costa ad apicem luteo-fuscescente.

Ephemera stigma, *Steph. Ill. Brit. Ent. Mand.* vi. 56, 3.
Potamanthus stigma, *Pictet, Hist. Nat. Neur. Eph.* 235.

P. Geeri?

England.

7. Potamanthus dispar.

Piceo-niger; abdominis basi pedibusque pallide rufo-piceis; setis luridis fusco subannulatis.

Ephemera dispar, *Steph. Ill. Brit. Ent. Mand.* vi. 58, 8.
Potamanthus dispar, *Pictet, Hist. Nat. Neur. Eph.* 234.

P. Geeri?

England.

8. Potamanthus castaneus.

Corpus longum, plerumque nigro-fuscum; mesothorax vitta discali; setæ caudales fuscæ; pedes omnino fusci; alarum venæ indistincte reticulatæ, regione subcostali vix colorata; alæ subimaginis maculatæ.

Potamanthus castaneus, *Pictet, Hist. Nat. Neur. Eph.* 215, 5, pl. 26, f. 4, 5.

Switzerland.

9. Potamanthus brunneus.

Corpus longum, plerumque nigro-fuscum; setæ caudales flavescentes; alæ indistincte reticulatæ, regione subcostali vix colorata; alæ subimaginis cinereæ, unicolores.

Potamanthus brunneus, *Pictet, Hist. Nat. Neur. Eph.* 217, 6, pl. 27.

Switzerland.

10. Potamanthus fuscus.

Obscure piceus; vertice et basi pedum anteriorum ferrugineis; pedibus posterioribus ochraceis; setis luridis fusco punctatis.

Ephemera fusca, *Curt. Phil. Mag.* 1834, 120. *Steph. Ill. Brit. Ent. Mand.* vi. 58, 9.
Potamanthus fuscus, *Pictet, Hist. Nat. Neur. Eph.* 235.

P. brunneus, Var.?

England.

11. Potamanthus helvipes.

Piceo-niger obscurus; pedibus helvolis; setis pallide luridis immaculatis; alis hyalinis.

Ephemera helvipes, *Steph. Ill. Brit. Ent. Mand.* vi. 59, 14.
Potamanthus helvipes, *Pictet, Hist. Nat. Neur. Eph.* 235.

P. fuscus?

England.

12. Potamanthus cinctus.

Corpus obscurum; abdomen nigricans, segmentis mediis maris albis; alæ indistincte reticulatæ, regione subcostali vix colorata.

Ephemera cincta, *Retz. Deg. Gen. et Sp. Ins.* 57, 182. *Deg. Ins.* ii. 650, pl. 17, f. 17, 18.
Ephemera dubia? *Steph. Ill. Brit. Ent. Mand.* vi. 59, 15. *Fuscus subnitidus; abdominis basi pedibusque pallidis; setis pallide luridis immaculatis; alis hyalinis, costa subflavescente.*

Potamanthus cinctus, *Pictet, Hist. Nat. Neur. Eph.* 219, 7, pl. 28.

a. England.

13. Potamanthus apicalis.

Fusco-ferrugineus, nitidus; abdominis basi pallida; pedibus ochraceo-ferrugineis; alis hyalinis.

Ephemera apicalis, *Steph. Ill. Brit. Ent. Mand.* vi. 59, 11.
Potamanthus apicalis, *Pictet, Hist. Nat. Neur. Eph.* 236.
Ephemera halterata, *Fabr. Ent. Syst.* ii. 69? *Shaw, Gen. Zool.* vi. 253, pl. 81, fig. med.?

Europe.

14. Potamanthus inanis.

E. cincto *affinis; abdominis segmenta* 1o *ad* 3um *nigra.*

Ephemera inanis, (*Mus. Lesk.*) *Enc. Méth.* vi. 421.
Potamanthus inanis, *Pictet, Hist. Nat. Neur. Eph.* 235.

Europe.

15. Potamanthus erythrophthalmus.

Corpus latum, breve, læte coloratum; mesothorax imaginis distincte lineatus; abdomen fere unicolor; alæ indistincte reticulatæ, regione subcostali vix colorata.

Ephemera erythrophthalma, *Schr. Faun. Boic.* 1940.

Ephemera rufescens, *Steph. Ill. Brit. Ent. Mand.* vi. 59, 12. *Pallide rufo-fulvus, subnitidus; pedibus rufescentibus posterioribus pallidioribus; setis luridis fusco-maculatis; alis hyalinis costa flavescente.*

Potamanthus erythrophthalmus, *Pictet, Hist. Nat. Neur. Eph.* 222, 8, pl. 29, 30.

Europe.

16. Potamanthus gibbus.

Corpus latum, breve, læte coloratum; mesothorax maris saltem non lineatus; abdomen fere unicolor; alæ indistincte reticulatæ, regione subcostali vix colorata, venæ subcostalis dimidio apicali nigricante.

Potamanthus gibbus, *Pictet, Hist. Nat. Neur. Eph.* 226, 9, pl. 31, 32.

Switzerland.

17. POTAMANTHUS SUBMARGINATUS.

Rufo-piceus; pedibus pallidioribus, geniculis posticis nigricantibus; alis hyalinis, costa subochracea.

Ephemera submarginata, *Steph. Ill. Brit. Ent. Mand.* vi. 58, 7.
Potamanthus submarginatus, *Pictet, Hist. Nat. Neur. Eph.* 236.

Allied to *P. erythrophthalmus.*

England.

18. POTAMANTHUS DILUTUS.

Pallide rufo-ferrugineus; abdomine nigricante; pedibus pallidis; alis hyalinis costa concolore.

Ephemera diluta, *Steph. Ill. Brit. Ent. Mand.* vi. 58, 10.
Potamanthus dilutus, *Pictet, Hist. Nat. Neur. Eph.* 236.

England.

19. POTAMANTHUS ROSEUS.

Pallide roseus, subnitidus; pedibus pallidioribus; setis luridis fusco maculatis; alis hyalinis basi summa et costa dilute roseis.

Ephemera rosea, *Steph. Ill. Brit. Ent. Mand.* vi. 59, 13.
Potamanthus roseus, *Pictet, Hist. Nat. Neur. Eph.* 236.

England.

20. POTAMANTHUS ÆNEUS.

Corpus latum, breve, læte coloratum; mesothorax maris saltem non lineatus; abdomen fere unicolor; alæ indistincte reticulatæ, regione subcostali vix colorata, vena subcostali omnino flava.

Potamanthus æneus, *Pictet, Hist. Nat. Neur. Eph.* 229, 10, pl. 33.

Switzerland.

21. Potamanthus halteratus.

Fuscus; abdomen album, apice fuscum; pedes antici albi; setæ corpore quadruplo longiores; alæ albæ.

Ephemera halterata, *Fabr. Ent. Syst.* ii. 69, 6.
Potamanthus halteratus, *Pictet, Hist. Nat. Neur. Eph.* 236.
Europe.

22. Potamanthus minor.

Obscure fuscus, segmentorum marginibus rufescentibus; pedibus pallidis; alis angustis hyalinis costa concolore.

Ephemera minor, *Steph. Ill. Brit. Ent. Mand.* vi. 60, 16.
Potamanthus minor, *Pictet, Hist. Nat. Neur. Eph.* vi. 237.
England.

23. Potamanthus? costalis, Mas.

Niger; thoracis linea ante alas albida; abdomine pedibusque rufo cingulatis; alæ subfumatæ, venis omnibus areolæ marginalis 1æ et 2æ infuscatis. Long. 6 lin.

Baëtis costalis, *Burm. Handb. Ent.* ii. 800, 2.
Potamanthus? costalis, *Pictet, Hist. Nat. Neur. Eph.* vi. 237.
New Holland.

P. costalis? Fem. *Nigro-picea, flavo guttata; thorax rufo-bivittatus; abdomen rufo varium; setæ piceæ; pedes rufi, femoribus piceo bifasciatis, tarsis piceis, antici picei, femoribus rufo fasciatis; alæ limpidæ, venis costalibus nigro-nebulosis.*

Fem.—Piceous black: head and thorax with pale yellow dots: head reddish on each side: antennæ black: thorax with an indistinct reddish stripe on each side: abdomen with some reddish marks, about twice the length of the thorax: setæ piceous: legs red; femora with two piceous bands; tarsi piceous: fore-legs piceous, with a red band near the tip of each femur: wings quite

limpid; veins black; transverse veins numerous and distinct; veins clouded with black along the fore border, which is brown along one-third from the tip. Length of the body 4½ lines; of the wings 12 lines.

a—c. New Holland. Presented by the Entomological Club.

24. Potamanthus? inanis.

Alæ duæ.

Potamanthus? inanis, *Pictet, Hist. Nat. Neur. Eph.* 232, 11, pl. 24, f. 5.

Brazil.

Genus 3. PALINGENIA.

Oculi remoti, maris simplices. Pedes bene determinati. Setæ caudales tres, media maris saltem brevissima. Alæ reticulatæ, quatuor, venis plurimis transversis. Larva subiens, instrumentis respiratoriis foliaceis, ciliatis.

Palingenia, *Burm. Handb. Ent.* ii. 2. *Pictet.*
Ephemeridæ, p., *Newman.*

Eyes simple in both sexes, almost always parted by an interval: wings four, like those of *Ephemera*, but with a more close reticulation: prothorax large: abdominal tentaculæ slightly curved; internal appendages large and conical: median tail-bristle of the male rudimentary.

1. Palingenia virgo.

Corpus flavum, immaculatum; prothorax longior quam latior; seta caudalis media brevissima sed distincta; alæ hyalinæ.

Palingenia virgo, *Pictet, Hist. Nat. Neur.* 141, 1, pl. 9, 10, 11, f. 1—3.

Ephemera virgo, *Oliv. Enc. Méth.* vi. 419, 11. *Reaum. Ins.* vi. 457, pl. 42—44. *Schæff. Abhandl. Ins.* iii. 30; *Icon. Ins. Ratisb.* pl. 175, f. 1—3. *Latr. Hist. Nat. Ins.* xiii. 98, 13.

Ephemera maroccana? *Fabr. Ent. Syst.* ii. 69, 3.
Palingenia horaria, *Burm. Handb. Ent.* ii. 802, 1.
Ephemera albipennis, *Latr. Règne Anim. de Cuv.* v. 252. *Ramb. Hist. Nat. Neuropt.* 296. *Westw. Intr. Class. Ins.* ii. 33. *Blanch. Cours Hist. Nat.* iii. 54.
Ephemera plumosa? *Müll. Zool. Dan. Prodr.* 244.
Ephemera, &c., *Villa, Comparsa Periodica delle Efimere nella Brianza*, 1847.
a. Rhine. Presented by F. Bond, Esq.

2. Palingenia puella.

Corpus flavum, immaculatum; prothorax latior quam longior; seta caudalis media brevissima sed distincta; alæ hyalinæ.

Palingenia puella, *Pictet, Hist. Nat. Neur. Eph.* 145, 2, pl. 11, f. 4.
New Orleans.

3. Palingenia limbata.

Corpus flavo fuscoque varium; prothorax pallide fulvus, fusco bimaculatus; seta caudalis brevissima sed distincta.

Palingenia limbata, *Sèrville, Guér. Icon. Règne Anim. Ins.* pl. 60, f. 7. *Pictet, Hist. Nat. Neur. Eph.* 146, 3, pl. 12.
Ephemera limbata, *Ramb. Hist. Nat. Ins. Neur.* 295, 4, pl. 8, f. 2.
North America.

4. Palingenia albicans.

Corpus flavum, immaculatum; seta caudalis media brevissima sed distincta; alæ basi violaceæ.

Ephemera albicans, *Percheron, Gen. Ins. Livr.* vi.; *Neuropt.* pl. 6.
Palingenia albicans, *Burm. Handb. Ent.* ii. 803. *Pictet, Hist. Nat. Neur. Eph.* 149, 4, pl. 13, f. 1—3.
Brazil.

Pal. albicans? Fem. — Testaceous, whitish beneath: head darker than the thorax: abdomen pale testaceous, blackish above for three-fourths of the length, less than twice the length of the thorax: setæ white, slender, shorter than the body: legs whitish, short: wings white, slightly opaque; veins whitish, brownish along the fore border of the fore-wing till near the tip. Length of the body 3½ lines; of the setæ 2½ lines; of the wings 12 lines.

a. Brazil. Presented by J. P. G. Smith, Esq.

5. Palingenia dorsalis.

Corpus flavo fuscoque varium; prothorax fusco vittatus; seta caudalis media brevissima sed distincta; alarum venæ violaceo-fuscæ.

Palingenia dorsalis, *Burm. Handb. Ent.* ii. 803, 3. *Pictet, Hist. Nat. Neur. Eph.* 153, 6, pl. 13, f. 5.

Brazil.

6. Palingenia Indica.

Corpus flavo fuscoque varium; prothorax fusco vittatus; seta caudalis media brevissima sed distincta; alarum venæ flavæ.

Palingenia Indica (*Kollar, MSS.*) *Pictet, Hist. Nat. Neur. Eph.* 151, 5, pl. 13, f. 4.

East Indies.

7. Palingenia longicauda.

Maxima; seta caudalis media fere obsoleta.

Ephemera longicauda, *Oliv. Enc. Méth. Ins.* vi. 418, 6. *Aug. Clutius, De Hemerobio sive Ephemero*, p. 96, 100. *Swammerd. Bibl. Nat.* i. 234-270, ii. pl. 13—15. *Schæff. Icon. Ins. Ratisb.* pl. 204, f. 3. *Latr. Hist. Nat. Ins.* xiii. 98, 8; *Gen. Cr. et Ins.* iii. 184. *Ramb. Hist. Nat. Neur.* 295, 5.

Ephemera flos-aquæ, *Illig. Mag.* i. 187, 17.

Ephemera Swammerdamia, *Latr. Hist. Nat. Ins.* xiii. 98, 7; *Règne Anim.* v. 244. *Blanch. Cours Hist. Nat.* iii. 54.

Palingenia longicauda, *Burm. Handb. Ent.* ii. 803, 2. *Westw. Intr. Class. Ins.* ii. 33. *Pictet, Hist. Nat. Neur. Eph.* 155, 7, pl. 14, 15.

Germany; France.

8. Palingenia Savignyi.

——— *Descript. de l'Egypte, Neuropt. Savigny*, pl. 2, f. 5.
Palingenia Savignyi, *Pictet, Hist. Nat. Neur. Eph.* 157.
Egypt.

9. Palingenia atrostoma.

Palingenia atrostoma, *Weber, Obs. Entom.* pl. 99, 1. *Pictet, Hist. Nat. Neur. Eph.* 157.

Brazil.

10. Palingenia lata.

Subimago. *Testacea; caput fuscum; thorax fusco bivittatus; abdominis dorsum fuscum; setæ latæ, pilosæ, corpore triplo longiores; alæ fuscæ.*

Male.—Testaceous, rather broad: head mostly brown: thorax with two brown stripes (which are broadest on the prothorax), and with some slight brown streaks: abdomen less than twice the length of the thorax, brown above except on each side: setæ pale testaceous, broad, hairy, thrice the length of the body: wings brown, with about twelve distinct longitudinal veins; transverse veins few and indistinct especially towards the hind border. Length of the body 9 lines; of the setæ 27 lines; of the wings 20 lines.

a, b. Silhet. From Mr. Sowerby's collection.

11. Palingenia viridescens, Fem.

Cinereo-fusca, subtus testacea; antennæ nigræ; abdomen apice testaceo bivittatum; setæ testaceæ abdomine breviores; pedes testacei; alæ subcinereæ.

Ephemera viridescens, *Barnston's MSS.*

Grayish brown, testaceous beneath excepting the disk of the pectus: antennæ black: hinder part of the thorax with testaceous borders: abdomen scabrous, more than twice the length of the thorax; the two last segments with a testaceous stripe on each side: setæ testaceous, pubescent, shorter than the abdomen: legs testaceous: wings grayish; veins black, testaceous at the base; longitudinal veins about twelve in number, differing much in structure from those of *P. lata*; transverse veins numerous and distinct: hind-wings with brown hind borders. Length of the body 9 lines; of the setæ 8 lines; of the wings 24 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by Dr. Barnston.

12. Palingenia occulta.

Testacea; antennæ nigræ; mesothoracis latera fusca; abdomen fusco bivittatum; setæ corporis longitudine; tarsi et pedes antici subfusci; alæ subcinereæ.

Testaceous: antennæ black, testaceous at the base: mesothorax brown on each side: abdomen darker than the thorax, with two irregular brown stripes: setæ dark testaceous, minutely pubescent, as long as the body: legs testaceous; tarsi and fore-legs brownish: wings grayish; veins black, testaceous at the base: fore-wings pale yellow at the base; fore border slightly tinged with brown. Length of the body 9—11 lines; of the setæ 8 lines; of the wings 18—22 lines.

a—c. Arctic America, between Lake Winipeg and Lake Superior. Presented by Sir John Richardson.

13. Palingenia natata.

Fusco-testacea; antennæ nigræ; abdomen fusco bivittatum; setæ fulvæ, fasciatæ, hirsutissimæ, corpore paullo breviores; pedes testacei, tibiis tarsisque fuscis; alæ subcinereæ, venis nebulosis, anticæ nigro maculatæ.

Ephemera natata, *Barnston, MSS.*

Subimago.—Dull testaceous, slightly shaded with brown: antennæ black: abdomen with two interrupted brown stripes, about thrice the length of the thorax: setæ tawny with darker bands, very hairy, a little shorter than the body: legs dark testaceous; tibiæ and tarsi brown: wings grayish; veins black, clouded with blackish brown except at the tips and along the hind borders: fore-wings with three or four black spots in the disk. Length of the body 9 lines; of the setæ 7 lines; of the wings 18 lines.

a, *b*. St. Martin's Falls, Albany River, Hudson's Bay. Presented by Dr. Barnston.

14. Palingenia humeralis.

Testacea; abdomen olivaceo-fuscum, subtus piceo-fuscum; setæ pubescentes; tibiæ anticæ albidæ, alæ subcinereæ, costa basali flava apicali subfusca.

Dull testaceous; abdomen olive-brown above, piceous brown beneath, about twice the length of the thorax: setæ testaceous, pubescent, longer? than the body, composed of very short and numerous joints: legs pale testaceous; fore-tibiæ whitish: wings slightly gray; veins black; fore border of the fore-wings yellow at the base, slightly tinged with brown towards the tip, its intermediate veins clouded with black. Length of the body 4 lines; of the wings 16 lines.

a. New Zealand. Presented by Dr. Sinclair.

15. Palingenia bicolor.

Ferruginea; pectus nigro bimaculatum; abdomen fuscum; setæ testaceæ, pilosæ, abdomine duplo longiores; pedes flavi, antici fusco-testacei, tarsis basi albidis; alæ cinereæ.

Subimago.—Pale ferruginous: pectus with a blackish spot on each side: abdomen brown, paler beneath, full twice the length of the thorax: setæ testaceous, hairy, about the length of the abdomen: legs yellow: fore-legs brownish-testaceous; tarsi whitish towards the base: wings gray, pubescent along the hind borders;

veins black, slightly clouded with brown. Length of the body 5 lines; of the setæ 3 lines; of the wings 12 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by Dr. Barnston.

16. Palingenia pallipes.

Ferruginea; capitis discus piceus; antennæ nigræ; thoracis latera fulvo maculata; setæ fulvæ, subfasciatæ; pedes testacei, antici ferruginei; alæ limpidæ, anticæ macula stigmaticali sublurida.

Fem. Dark ferruginous, paler beneath: disk of the head piceous: antennæ black: thorax with some tawny spots on each side: abdomen less than twice the length of the thorax: setæ dull tawny, a little darker about the sutures of the joints, a little longer than the body: middle seta short: legs testaceous: fore-legs ferruginous: wings limpid; veins brown, distinct: fore border of the fore-wings with a lurid tinge towards the tip.

Subimago.—Brown: wings gray. Length of the body 4½ lines; of the setæ 7 lines; of the wings 11 lines.

a—c. Nova Scotia. From Lieut. Redman's collection.

17. Palingenia concinna.

Picea, subtus ferrugineo varia; setæ testaceæ, corpore plus duplo longiores; pedes testacei, gracillimi, antici fusci longissimi, femoribus testaceis; alæ limpidæ, costa apicali subfusca.

Male.—Piceous, partly ferruginous beneath: antennæ black: abdomen less than twice the length of the thorax: tentacula luteous: middle seta very short; lateral setæ dull testaceous, more than twice the length of the body: legs testaceous, very slender: fore-legs brown, very long; femora testaceous: wings limpid; veins pale testaceous, darker towards the tips: fore border of the fore-wings pale brown along one-third of the length from the tip. Length of the body 4 lines; of the setæ 12 lines; of the wings 10 lines.

a. Nova Scotia. From Lieut. Redman's collection.

18. Palingenia nebulosa.

Niger; abdomen piceum, subtus fulvum; setæ testaceæ, fusco fasciatæ, corpore plus duplo longiores; pedes fulvi, antici obscuriores longissimi; alæ limpidæ, anticæ fusco fasciatæ.

Male.—Black: abdomen piceous, tawny beneath, nearly twice the length of the thorax: setæ testaceous; middle seta very slender, about half the length of the abdomen; lateral setæ with brownish bands, more than twice the length of the body: legs tawny: fore-legs dark tawny, very long: wings limpid; veins brown: fore-wings with a broad, brown band, which occupies full one-third of the length, and extends nearly to the tip. Length of the body 4½ lines; of the setæ 12 lines; of the wings 9 lines.

a—b. St. Martin's Falls, Albany River, Hudson's Bay. Presented by Dr. Barnston.

19. Palingenia albifilum.

Fulva; caput nigrum; antennæ testaceæ; abdomen testaceum; setæ albæ, corpore triplo longiores; pedes testacei, antici subfusci; alæ limpidæ, venis albis.

Tawny: head mostly black: antennæ testaceous: abdomen testaceous: setæ white, slender, thrice the length of the body: legs testaceous: fore-legs brownish: wings limpid, broad; veins white. Length of the body 4—5 lines; of the setæ 15—18 lines; of the wings 10—13 lines.

Var. Abdomen brownish above: fore-wings with a blackish tinge towards the base: veins of the fore border blackish for one-third of the length from the base.

a, b. Pará. Presented by J. P. G. Smith, Esq.

20. Palingenia latipennis.

Pallide testacea, nonnunquam obscurior; setæ albæ, corpore duplo longiores; pedes albi; alæ subalbæ, sublimpidæ, venis albis.

Subimago.—Pale testaceous: abdomen twice the length of the thorax: setæ white, twice the length of the body: legs white: wings whitish, nearly limpid; veins white. Length of the body 3—3½ lines; of the setæ 7 lines; of the wings 7 lines.

Var. Head piceous above: prothorax with two short brown streaks: disk of the mesothorax tawny.

a—c. Pará. From Mr. Stevens' collection.

21. Palingenia vitrea.

Testacea; femora fusco subnotata; alæ albidæ, subopacæ, venis testaceis.

Ephemera vitrea, *Barnston, MSS.*

Subimago.—Testaceous: abdomen hardly twice the length of the thorax: an indistinct brownish mark on each femur: wings dingy whitish, slightly opaque; veins testaceous. Length of the body 3 lines; of the wings 12 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by Dr. Barnston.

Genus 4. BAËTIS.

Oculi maris approximati, simplices. Pedes bene determinati. Setæ caudales duæ. Alæ reticulatæ, quatuor, venis plurimis. Larva valde depressa, repens, non subiens, cauda simplici.

Baëtis, *Leach; Steph.; Curt.; Burm.; Pictet.*
Ephemeræ bisetæ, *Zett.*
Baëtidæ, *Newman.*

Eyes simple in both sexes, but much largest in the male where they are generally only separated by a very small interval: wings four, with numerous cross-veins; fore-wings long and narrow; hind-wings almost as long as one-fourth of the fore-wings, with a complete neuration and an angular costal border: abdominal tentacula large and much curved; internal appendages short and quadrate:

two tail-bristles of equal length, without any rudiment of the median bristle.

1. Baetis fluminum.

Corpus fulvum, fusco maculatum; caput mediocre; oculi maris approximati; pedes immaculati, aut vix maculati; alæ hyalinæ, aut basi subtinctæ, areola costali pallida invaria.

Baëtis fluminum, *Pictet, Hist. Nat. Neur. Eph.* 164, 1, pl. 16—19.
Allied to Ephemera —— *Schæff. Icon. Ins. Ratisb.* pl. 229, 2, 3, *and* 232, 4, 5.

a, b. England. Presented by F. Walker, Esq.
c—e. England.

2. Baetis venosa.

Pallide castanea; oculi nigri; abdominis latera lineis obliquis valde, distinctis notata, marginibus fuscis; alæ hyalinæ, areola costali basi hyalina apice colorata.

Baëtis venosa, *Burm. Handb. Ent.* ii. 801, 6. *Steph. Ill. Brit. Ent. Mand.* vi. 63, 2. *Pictet, Hist. Nat. Neur. Eph.* 167, 2, pl. 20, f. 1.
Ephemera venosa, *Fabr. Ent. Syst.* ii. 70, 8. *Deg. Ins.* ii. 652, 4, pl. 18, f. 1—4. *Oliv. Enc. Méth.* 418, 8. *Latr. Hist. Nat. Ins.* xiii. 97, 10. *Zett. Ins. Lapp.* 1045, 7.
Ephemera nervosa, *Fabr. Sp. Ins.* i. 384, 6. *De Vill. Linn. Ent.* iii. 22, 14.
Baëtis dispar? *Curt. Brit. Ent.* xi. pl. 484. *Phil. Mag.* 1834, 120. *Steph. Ill. Brit. Ent. Mand.* vi. 63, 1.

a, b. England.

3. Baetis cyanops.

Corpus angustum, fulvum; oculi cyanei; alæ hyalinæ, aut basi subtinctæ, areola costali basi hyalina apice colorata.

—— *Schæff. Icon. Ins. Ratisb.* 229, 2, 3, 239, 4, 5.
Baëtis cyanops, *Pictet, Hist. Nat. Neur. Eph.* 171, 3, pl. 20, f. 2.
Switzerland.

4. Baetis montana.

Oculi cyanei; thorax niger; abdomen viridescens, innotatum; alæ hyalinæ, aut basi subtinctæ, areola costali basi hyalina apice colorata.

Baëtis montana, *Pictet, Hist. Nat. Neur. Eph.* 172, 4, pl. 20, f. 3.

a, b.? England. Presented by F. Walker, Esq.

5. Baetis purpurascens.

Oculi cinerei; thorax et abdomen pallide violacea; alæ hyalinæ, aut basi subtinctæ, areola costali basi hyalina apice colorata.

Baëtis purpurascens, *Pictet, Hist. Nat. Neur. Eph.* 174, 5, pl. 20, f. 4.

Switzerland.

6. Baetis lateralis.

Corpus fulvum, fusco maculatum; caput maximum; oculi maris remoti; pedes immaculati aut vix maculati; alæ hyalinæ aut basi subtinctæ, areola costali pallida invaria.

Baëtis lateralis, *Curt. Phil. Mag.* 1834, 121. *Steph. Ill. Brit. Ent. Mand.* vi. 65, 8. *Pictet, Hist. Nat. Neur. Eph.* 175, 6, pl. 21.

a. England. Presented by F. Walker, Esq.

7. Baetis semicolorata.

Femora anteriora fusca; alæ dimidio basali valde colorata, areola costali immaculata.

Baëtis semicolorata, *Curt. Phil. Mag.* 1834, 121. *Steph. Ill. Brit. Ent. Mand.* vi. 64, 7. *Pictet, Hist. Nat. Neur. Eph.* 7.

Europe.

8. Baetis semitincta.

Femora anteriora fulva; alæ dimidio basali mediocriter colorata, areola costali immaculata.

Baëtis semitincta, *Pictet, Hist. Nat. Neur. Eph.* 180, 8, pl. 22, f. 1—3.

Switzerland.

9. Baetis obscura.

Corpus omnino nigrum; alæ hyalinæ; areola costalis invaria.

Baëtis obscura, *Steph. Ill. Brit. Ent. Mand.* vi. 65, 9. *Pictet, Hist. Nat. Neur. Eph.* 182, 9, pl. 23, f. 1.

a? England. Presented by F. Walker, Esq.

10. Baetis cerea.

Corpus omnino fulvum vel flavum; alæ hyalinæ aut basi subtinctæ, areola costali immaculata, venis transversis fulvis indistinctis.

Baëtis cerea, *Pictet, Hist. Nat. Neur. Eph.* 183, 10, pl. 23, f. 2.

a. England. Presented by F. Walker, Esq.
b. England

11. Baetis sulphurea.

Corpus latum, stramineum; oculi virides; alæ hyalinæ aut basi subtinctæ, areola costali basi hyalina apice colorata.

Baëtis sulphurea, *Pictet, Hist. Nat. Neur. Eph.* 185, 11, pl. 23, f. 3.
Ephemera sulphurea, *Müller, Zool. Dan. Prodr.* 142, 1645.
Ephemera helvola? *Sulz. Abg. Gesch.* pl. 24, f. 7. *Roemer, Gen.* pl. 24.
Baëtis straminea? *Curt. Phil. Mag.* 1834, 121.

Europe.

12. Baetis flaveola.

Corpus omnino fulvum vel flavum; alæ hyalinæ aut basi subtinctæ, areola costali immaculata, venis transversis nigricantibus optime determinatis.

Baëtis flaveola, (*Kollar, MSS.*) *Pictet, Hist. Nat. Neur. Eph.* 186, 12, pl. 23, f. 4.

B. flaveola?—Pale testaceous: antennæ darker: abdomen pale luteous, with narrow blackish bands on the sutures of the segments, about twice the length of the thorax: setæ whitish, very minutely pubescent, without bands, more than twice the length of the body: legs whitish, slender: fore-legs long; femora with a brownish spot in the middle and another at the tip: wings limpid; veins brownish, partly pale, not strongly marked.

Subimago.—Paler: setæ shorter: wings slightly opaque, pubescent along the hind border; veins pale or brown. Length of the body 2½ lines; of the setæ 8 lines; of the wings 9 lines.

a—c. St. Martin's Falls, Albany River, Hudson's Bay. Presented by Dr Barnston.

13. Baetis guttata.

Corpus fulvum, fusco maculatum; pedes distinctissime maculati; alæ hyalinæ aut basi subtinctæ; areola costalis fuscescens invaria.

Baëtis guttata, *Pictet, Hist. Nat. Neur. Eph.* 187, 13, pl. 24, f. 3.
Switzerland.

14. Baetis Australasica.

Areola costalis venis transversis nigro maculatis.

Baëtis Australasica, (*Kollar, MSS.*) *Pictet, Hist. Nat. Neur. Eph.* 189, 14, pl. 24, f. 1.
New Holland.

15. Baetis aurantiaca.

Rufo-testacea ; segmentis abdominalibus utrinque linea obliqua nigra ; alæ graciles, hyalinæ. Long. 3½ lin.

Baëtis aurantiaca, *Burm. Handb. Ent.* ii. 801, 4. *Pictet, Hist. Nat. Neur. Eph.* 191.

Germany.

16. Baetis longicauda.

Ochraceo-lutea ; pedibus pallidioribus ; setis longissimis ; geniculis abdominisque segmentorum marginibus fuscis.

Baëtis longicauda, *Steph. Ill. Brit. Ent. Mand.* vi. 63, 3. *Pictet, Hist. Nat. Neur. Eph.* 193.
Baëtis mellea, *Curt. Phil. Mag.* 1834, 121.

England.

17. Baetis elegans.

Ochraceo-flava ; abdomine pallide subcastaneo ; tarsorum articulis apice nigris ; alis subflavescentibus, costa saturatiore.

Baëtis elegans, *Curt. Phil. Mag.* 1834, 120. *Steph. Ill. Brit. Ent. Mand.* vi. 64, 6. *Pictet, Hist. Nat. Neur. Eph.* 193.

a. England. Presented by F. Walker, Esq.

18. Baetis carnea.

Incarnata ; abdomine saturatiore ; setis immaculatis ; alis elongatis, hyalinis, costa subrosea, venis subfuscis.

Baëtis carnea, *Curt. Phil. Mag.* 1834, 121. *Steph. Ill. Brit. Ent. Mand.* vi. 65, 10. *Pictet, Hist. Nat. Neur. Eph.* 193.

England.

19. Baetis flavescens.

B. stramineæ *similis sed minor.*

Baëtis flavescens, *Curt. Phil. Mag.* 1834, 121. *Pictet, Hist. Nat. Neur. Eph.* 193.
Baëtis straminea, var?

England.

20. Baetis costalis.

Pallide castanea; thoracis lateribus, abdominis apice et pedibus ochraceis; alis hyalinis, costa flavescente.

Baëtis costalis, *Curt. Phil. Mag.* 1834, 120. *Steph. Ill. Brit. Ent. Mand.* vi. 64, 4. *Pictet, Hist. Nat. Neur. Eph.* 194.

England.

21. Baetis subfusca.

Obscure castanea; abdomine fuscescente, segmentorum marginibus saturatioribus; alis subflavescentibus, costa concolore, stigmate subochraceo.

Baëtis subfusca, *Steph. Ill. Brit. Ent. Mand.* vi. 64, 5. *Pictet, Hist. Nat. Neur. Eph.* 194.

England.

22. Baetis? reticulata.

Fusca; thoracis vittis, abdominis cingulis femoribusque pallidioribus; alæ cinereæ, venis omnibus late fuscis. Long. 3½ lin.

Baëtis reticulata, *Burm. Handb. Ent.* ii. 2, 801, 5.
" Baëtis fluminum et Potamanthi vespertini subimagines confusæ ?" *Pictet.*

Germany.

23. Baetis interpunctata.

Albida; caput viridescens; abdominis segmenta marginibus posticis nigris.

Baëtis interpunctata, *Say, Journ. Acad. Nat. Sci. Phil.* viii. 41, 1.

Yellowish white, tinged with green: head rather prominent, yellow-green; vertex with a lateral black point: eyes with a longitudinal black line: ocelli distant, each with a black orbit; anterior one less than half the size of the others: front with a black angular line under the antennæ: seta of the antennæ black: prothorax with a black line on each side: thorax somewhat brownish: abdomen with the hind borders of the segments black: setæ immaculate: legs greenish; anterior femora with two blackish bands; hind pair with dusky tips: wings greenish on the fore border, with black transverse veins, and a distinct black abbreviated longitudinal line on the middle, between the third and fourth veins; the small black spot on the middle of the costal border is very obvious: tip of the abdomen more or less ferruginous. Length nearly three-tenths of an inch.

Indiana.

24. Baetis arida.

Fuscescens; pedes posteriores et setæ alba.

Baëtis arida, *Say, Journ. Acad. Nat. Sci. Phil.* viii. 42, 2.

Reddish brown, with dusky incisures: head rather prominent, whitish, varied with ferruginous; vertex with a small black spot on each side of the orbit: eyes rufous, with a whitish vitta: ocelli prominent, approximate; anterior one nearly as large as the others: fore-tibiæ whitish, obscure at each end; posterior legs and setæ greenish white. Length $\frac{2}{3}$ths of an inch.

Indiana.

25. Baetis verticis.

Flavido-alba; caput ferrugineum; thorax ferrugineo bivittatus.

Baëtis verticis, *Say, Journ. Acad. Nat. Sci. Phil.* viii. 42, 3.

Yellowish white: head sessile; vertex ferruginous: thorax with two ferruginous vittæ, confluent before and becoming obsolete behind: setæ with black rings, hardly longer than the body: legs white; fore-femora ferruginous at the tips; tips of the fore-tibiæ and of the joints of the fore-tarsi brown: veins of the wings except those of the margin, black; hind-wings not extending beyond the fourth abdominal segment. Length more than ¼ of an inch.

Indiana.

26. Baetis obesa.

Brevis; alæ nigricantes, maculis una magna plurimisque parvis hyalinis.

Baëtis obesa, *Say, Journ. Acad. Nat. Sci. Phil.* viii. 43, 4.

Subimago.—Very short and robust, blackish livid: borders of the abdominal segments dull rufous, livid: setæ very short, hairy, with black rings: legs pale yellowish; tips of the joints of the tarsi black: wings dark brown or blackish, with numerous small, transverse, hyaline spots or abbreviated lines, and a large, hyaline, very oblique semifascia about the middle on the anal half: hind-wings with numerous transverse abbreviated hyaline lines, which do not extend to the apical margin. Length over $\frac{3}{16}$ths of an inch.

Indiana.

27. Baetis luridipennis.

Fusca; abdomine cingulato; alis luridis fusco venosis. Long. mar. 7 lin.; fœm. 9¼ lin.

Baëtis luridipennis, *Burm. Handb. Ent.* ii. 2, 801, 7. *Pictet, Hist. Nat. Neur. Eph.* 192.

North America.

B. luridipennis? Male.—Tawny: antennæ brown, tawny at the base: abdomen with brownish bands on the sutures of the segments, less than twice the length of the thorax: setæ whitish, very minutely pubescent, a little more than twice the length of the body:

legs whitish, rather stout; a pale brownish band on the middle and another at the tip of each femur: fore-legs long: wings limpid; veins tawny: fore border of the fore-wing with a slight tawny tinge towards the tip. Length of the body 4 lines; of the setæ 12 lines; of the wings 12 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by Dr. Barnston.

28. Baetis angulata, Mas.

Ferruginea, testaceo varia; abdominis discum piceum; setæ fuscæ, testaceo annulatæ, corpore plus duplo longiores; pedes testacei, antici picei; alæ limpidæ, anticæ ad costam fuscæ, posticæ fusco submarginatæ.

Male.—Ferruginous, partly testaceous beneath: disk of the head tawny in front: mesothorax and metathorax testaceous: abdomen less than twice the length of the thorax; disk above piceous: setæ brown with distinct testaceous bands, more than twice the length of the body: legs testaceous: fore-legs piceous: wings limpid; veins black; transverse veins numerous and strongly marked: fore border of the fore-wings brown: hind-wings slightly tinged with brown along the hind border. Length of the body 9 lines; of the setæ 23 lines; of the wings 20 lines.

a. Canada. Presented by Dr. Barnston.

29. Baetis remota.

Picea, ferrugineo varia; setæ testaceæ, corpore multo longiores; pedes testacei, antici picei longissimi; alæ limpidæ, anticæ longæ, costa basi lurida apice fusca.

Piceous, partly ferruginous on each side and beneath: setæ dull testaceous, much longer than the body: legs testaceous, slender: fore-legs piceous, very long: wings limpid; veins black: fore-wings long, with an indistinct tinge on the fore border, which is lurid at the base and brown towards the tip. Length of the wings 16 lines.

a. New Zealand. Presented by Dr. Sinclair.

30. Baetis vicaria, Mas.

Ferruginea; antennæ nigræ; thoracis latera flavo notata; abdomen fusco fasciatum; setæ testaceæ, subannulatæ, corpore plus duplo longiores; pedes testacei, femoribus nigro bifasciatis; alæ hyalinæ, anticæ venis costalibus et discalibus fusco nebulosis.

Male.—Ferruginous: antennæ black: thorax with pale yellow marks on each side: abdomen hardly twice the length of the thorax; a brown band on each segment: setæ dull testaceous, darker on the sutures of the joints, more than twice the length of the body: legs testaceous, slender; a broad brown band on the middle, and a narrower one on the tip of each femur: fore-legs longer and darker: wings hyaline; veins of the fore-wings brown, indistinctly clouded along the fore border, and in the disk: fore border pale brown for one-third of the length from the tip. Length of the body 6 lines; of the setæ 15 lines; of the wings 15 lines.

a. North America? Presented by the Entomological Club.

31. Baetis basalis, Mas.

Nigro-picea, longa, gracilis; abdomen testaceo fasciatum; setæ albidæ, nigro annulatæ, corpore fere duplo longiores; alæ anticæ limpidæ, venis costalibus fusco nebulosis, posticæ fuscæ apice limpidæ.

Pitchy black, long, slender: abdomen with dull testaceous bands on the sutures of the segments, more than twice the length of the thorax: tentacula whitish: setæ whitish with blackish bands on the sutures of the joints, nearly twice the length of the body: fore-wings limpid; veins brown, clouded along the fore border with black, which forms a spot about the middle of the costa: hind-wings brown, limpid towards the tips. Length of the body 6 lines; of the setæ 11 lines; of the wings 14 lines.

a. Lake Winipeg. Presented by Sir John Richardson.

32. Baetis tessellata.

Albido-testacea, sat lata, fusco notata; abdomen supra fuscum; setæ testaceæ, corpore fere duplo longiores; pedes testacei, femoribus nigro fasciatis, tarsis fuscis; alæ subcinereæ, venis testaceis fusco nebulosis.

Subimago.—Whitish testaceous, rather broad, marked here and there with brown: antennæ brown, testaceous at the base: abdomen brown above, less than twice the length of the thorax: setæ testaceous, without bands, nearly twice the length of the body: legs testaceous, rather long; femora with a blackish band on each: tarsi brown: wings grayish; veins testaceous, clouded with black. Length of the body 5 lines; of the setæ 9 lines; of the wings 14 lines.

a. Nova Scotia. From Lieut. Redman's collection.

33. Baetis albivitta.

Nigra, gracilis, albo vittata, subtus ferruginea; setæ fuscæ, testaceo annulatæ, corpore duplo longiores; pedes testacei, tibiis tarsisque anticis nigris; alæ subluridæ, anticæ costa saturate lurida, posticæ venis fusco nebulosis.

Black, slender, with a white dorsal stripe extending along the whole length of the body, and having a testaceous tinge on the head; under side ferruginous: setæ twice the length of the body, brown with testaceous bands: legs testaceous; fore-tibiæ and fore-tarsi black: wings with a slight lurid tinge; veins black: fore-wings deeply lurid along the fore border: veins of the hind-wings clouded with brown. Length of the body 8 lines; of the setæ 16 lines; of the wings 13 lines.

a. Pará. Presented by Gordon Graham, Esq.
b. Brazil From Mr. Stevens' collection.

34. Baetis annulata, Mas.

Ferruginea, subtus testacea; thorax testaceo bivittatus; abdominis latera testaceo maculata; setæ albidæ, nigro annulatæ; pedes albidi fasciis nigricantibus, antici longissimi; alæ hyalinæ.

Male.—Ferruginous, testaceous beneath: eyes very large, connected: antennæ brown, ferruginous at the base: thorax with two testaceous stripes: abdomen rather less than twice the length of the thorax; each segment with a triangular testaceous spot on each side: setæ whitish, mutilated, with black bands on the sutures of the joints: legs whitish, with blackish bands: fore-legs very long: wings hyaline; veins blackish, very slender, but distinct. Length of the body 5 lines; of the wings 13 lines.

a. Trenton Falls, New York. Presented by the Entomological Club.

35. Baetis Taprobanes, Mas.

Nigra; thoracis latera ferrugineo notata; abdominis latera testaceo maculata; setæ piceæ, corpore plus duplo longiores; pedes picei; alæ hyalinæ, anticæ basi fuscæ.

Male.—Black: thorax with some ferruginous marks on each side: abdomen twice the length of the thorax; each segment with a triangular testaceous spot on each side of the fore border: setæ piceous, much more than twice the length of the body: legs piceous: wings hyaline; veins black; transverse veins numerous and distinct: fore-wings brown at the base; fore border pale brown for one-third of the length from the tip. Length of the body 5 lines; of the setæ 14 lines; of the wings 13 lines.

a. Ceylon. Presented by R. Templeton, Esq.

36. Baetis? determinata, Mas.

Picea, flavo vittata, subtus testacea; caput flavo varium; abdominis vitta piceo notata; pedes testacei, femoribus ferrugineo fasciatis, tarsis apice ferrugineis; alæ limpidæ, costa fusca striga basali flava.

Male.—Piceous, testaceous beneath: head yellow about the eyes: antennæ black: thorax with a yellow stripe which has a luteous tinge on the metathorax: abdomen hardly twice the length of the thorax, with a broad yellow stripe which contains some piceous marks: legs testaceous; a broad ferruginous band on each femur; tarsi ferruginous towards the tips: fore-legs long: wings quite limpid: veins black; transverse veins very numerous and strongly marked: fore border of the fore-wings dark brown, with a yellow streak in the front towards the base. Length of the body 5 lines; of the wings 11 lines.

a. Java. From Mr. Argent's collection.

37. Baetis invaria, Mas.

Ferruginea, subtus fulva; antennæ nigræ, basi ferrugineæ; pedes testacei, antici longi; alæ limpidæ, venis testaceis transversis albidis.

Male.—Pale ferruginous, tawny beneath: antennæ black, ferruginous at the base: abdomen hardly twice the length of the thorax: legs testaceous; fore-legs long: wings limpid; veins pale testaceous, indistinct; transverse veins whitish, very indistinct. Length of the body 2½—3 lines; of the wings 7—9 lines.

a—c. St. Martin's Falls, Albany River, Hudson's Bay. Presented by Dr. Barnston.

38. Baetis fusca.

Picea, subtus ferruginea; abdomen ferrugineum, subtus fulvum; setæ testaceæ, fusco subannulatæ, corpore plus duplo longiores; pedes testacei, antici fusci; alæ hyalinæ, venis testaceis, anticæ costa apicali fusca.

Piceous, ferruginous beneath: antennæ black: abdomen ferruginous, tawny beneath, hardly twice the length of the thorax: setæ dull testaceous, more than twice the length of the body, with pale brownish bands on the sutures of the joints: legs testaceous; fore-legs brown: wings hyaline; veins testaceous; fore border of the fore-wings pale brown for one-third of the length from the tip.

Length of the body 4 lines; of the setæ 12 lines; of the wings 9 lines.

a, *b*. St. Martin's Falls, Albany River, Hudson's Bay. Presented by Dr. Barnston.
c. Nova Scotia. From Lieut. Redman's collection.

39. Baetis debilis.

Ferruginea; setæ testaceæ, corpore longiores; pedes testacei; alæ sublimpidæ, venis testaceis.

Fem.—Ferruginous: abdomen darker than the thorax and twice its length; setæ testaceous, longer than the body: legs pale testaceous: wings nearly limpid; veins pale testaceous, distinct. Length of the body 3 lines; of the setæ 4 lines; of the wings 8½ lines.

a. Nova Scotia. From Lieut. Redman's collection.

40. Baetis Canadensis.

Testacea; capitis vertex thoracisque discus ferruginei; abdomen piceo fasciatum; pedes pallidi; femorum fasciis tarsisque nigricantibus; alæ limpidæ, costa apicali fusca. Var.? *Flava; caput supra piceum; thorax antice piceo bivittatus, apud discum ferrugineus; abdomen ferrugineo fasciatum; setæ fusco subannulatæ, corpore paullo plus duplo longiores; femora fasciis duabus nigricantibus; alæ anticæ costa apicali subflava.*

Male.—Pale testaceous: head ferruginous above: disk of the thorax ferruginous: abdomen rather less than twice the length of the thorax; borders of the segments piceous: legs pale testaceous; bands of the femora and tarsi blackish: wings limpid; veins black, very distinct: fore border of the fore-wings brown along one-third of the length from the tip. Length of the body 3 lines; of the wings 8 lines.

a. Canada. Presented by Dr. Barnston.

Var.? Pale yellow: head piceous above: thorax with two piceous stripes in front; disk mostly ferruginous: hind borders of the abdominal segments mostly ferruginous: setæ rather more than twice the length of the body; sutures of the joints brownish: femora with two blackish bands: fore border of the fore-wings with a pale yellow tinge, brown for one-third of the length from the tip. Length of the body 4 lines; of the setæ 9 lines; of the wings 10 lines.

a. ——— ?

41. Baetis fuscata.

Picea, subtus ferruginea; thoracis latera luteo maculata; pedes ferruginei, antici picei; alæ limpidæ, venis pallidis. Subimago? *Testacea; setæ corpore longiores; alæ cinereæ.*

Ephemera fuscata, *Barnston, MSS.*

Piceous, ferruginous beneath: antennæ black: thorax with some luteous spots on each side: abdomen less than twice the length of the thorax: legs ferruginous; fore-legs piceous: wings limpid; veins pale, slender; transverse veins indistinct. Subimago?—Dull testaceous: setæ pale testaceous, longer than the body: wings gray; hind borders ciliated. Length of the body 2—2½ lines; of the wings 6—8 lines.

a, *b*. St. Martin's Falls, Albany River, Hudson's Bay. Presented by Dr. Barnston.

42. Baetis scita.

Nigro-picea, gracilis; setæ albidæ, nigro annulatæ, corpore multo longiores; pedes testacei, longi, graciles, femoribus tibiis et tarsorum articulis apice nigris; alæ limpidæ, venis nigris, costa venis nigro nebulosis basi nigro-fusca.

Piceous black, slender: setæ whitish with numerous black rings, much longer than the body: legs pale testaceous, long and slender; tips of the femora, of the tibiæ and of the joints of the tarsi black; a blackish band on each femur: wings quite limpid; veins black, very slender: fore border of the fore-wings blackish-

brown at the base; its veins stout, clouded with black. Length of the body 2½ lines; of the setæ 4 lines; of the wings 6½ lines.

a, *b*. New Zealand. Presented by Dr. Sinclair.

43. Baetis? torrida.

Ferruginea; caput piceum; thoracis latera testacea; pedes testacei, validi, femoribus apice pedibusque anticis piceis; alæ subluridæ, anticæ costa fusca.

Ferruginous, paler beneath: head piceous: sides of the thorax testaceous: abdomen mutilated: legs testaceous, stout; tips of the femora and fore-legs piceous: wings with a slight lurid tinge; veins black, distinct; fore border of the fore-wings brown. Length of the body 4 lines? of the wings 10 lines?

a. Philippine Isles. From Mr. Wood's collection.

44. Baetis? ignota, Mas.

Picea; abdomen subtus ferrugineum; setæ testaceæ; pedes flavi, antici picei; alæ limpidæ, venis albis.

Male.—Piceous: abdomen twice the length of the thorax, ferruginous beneath: setæ testaceous, mutilated; legs entirely pale yellow; fore-legs piceous: wings wholly limpid, with no stigma or tinge along the fore border; veins white. Length of the body 4½ lines; of the wings 12 lines.

a. ———?

45. Baetis? ———, Subimago.

Ephemera angustipennis, *Ramb. Hist. Nat. Ins. Neur.* 295, 6.

Fem.—Size of *Cloeon Diptera:* head with the eyes broader than the chest: eyes very prominent exteriorly, very far apart: ocelli almost on the same line: thorax rather dark red: abdomen reddish-gray, pale, with two rather thick filaments: legs dull reddish; tarsi 5-jointed: wings grayish: fore-wings narrow at the base, their veinlets with slightly brownish borders.

Madrid.

Genus 5. CLOËON.

Oculi maris duplices. Pedes bene determinati. Setæ caudales duæ. Alæ quatuor, venis transversis paucis. Larva natans, non subiens, cauda valde ciliata.

Ephemera, *Linn.*; *De Vill.*; *Fabr.*; *Gmel.*; *Oliv.*; *Schr.*; *Walkn.*; *Latr.*; *Stew.*; *Turt.*; *Guér.*; *Zett.*; *Blanch.*
Cloëon, *Leach*; *Steph.*; *Curt.*
Cloë, *Burm. Handb. Ent.* ii. 2; *Pictet*; *Ramb.*
Baëtis, p., *Steph.*
Oxycypha, p., *Burm.*

Each of the ordinary eyes of the male surmounted by a great reticulated eye in the form of a turban, that is supported on an obconical ring at whose base is the ordinary eye: wings two or four; fore-wings having only very few cross-veins which generally form two crooked lines: lower wings, when they exist, rudimentary, and with a more or less incomplete neuration: abdominal tentacula rather large; internal appendages short, conical: two tail-bristles with a very little rudiment of the median one.

A. Alæ quatuor.

1. Cloeon bioculata.

Maris oculi obscuri; mesothorax flavus unicolor; abdomen basi apiceque obscurum, apud medium pallidius; alæ non fasciatæ nec maculatæ.

Ephemera bioculata, *Linn. Hist. Nat. Ed.* 12, ii. 906, 5. *De Vill. Linn. Ent.* iii. 18, 7. *Oliv. Enc. Méth.* vi. 419, 10. *Fabr. Ent. Syst.* ii. 70, 9. *Gmel. Ed. Syst. Nat.* i. 2629, 5. *Barbut, Gen.* pl. 11, fig. inf. sinist.? *Stew. El. Nat. Hist.* ii. 211. *Turt. Syst. Nat.* iii. 394. *Walkn. Faun. Par.* ii. 9, 6. *Panz. Faun.* xciv. fig. 17. *Latr. Hist. Nat. Ins.* xiii. 97? *Guér. Icon. Règne Anim. Ins. Pl.* 60. *Zett. Ins. Lapp.* 1044, 9. *Blanch. Hist. Nat. Ins.* iii. 54, 6.

Baëtis bioculata, *Steph. Ill. Brit. Ent. Mand.* vi. 65, 12.
Cloë bioculata, *Pictet, Hist. Nat. Neur. Eph.* 244, pl. 34, 35.

a—d. England. Presented by F. Walker, Esq.
e—f. England.
g. St. Martin's Falls, Albany River, Hudson's Bay. Presented by F. Walker, Esq.

2. Cloeon Rhodani.

Maris oculi obscuri; mesothorax fuscus vel niger, nonnunquam albo lineatus; abdomen basi apiceque obscurum, apud medium pallidius; setæ caudales fusco maculatæ; pedes anteriores fusci vel fusco maculati; alæ non fasciatæ nec maculatæ.

Cloë Rhodani, *Pictet, Hist. Nat. Neur. Eph.* 248, 2, pl. 36—39.

Switzerland.

3. Cloeon fuscata.

Oculi fusci; mesothorax omnino niger; abdomen basi apiceque obscurum, medio pallidius; setæ caudales albæ; pedes albi, non maculati; alæ non fasciatæ nec maculatæ, posticæ mediocres.

Ephemera fuscata, *Linn. Syst. Nat. Ed.* 12, ii. 907, 6. *De Vill. Linn. Ent.* iii. 19, 8. *Oliv. Enc. Méth.* vi. 419, 9. *Fabr. Ent. Syst.* ii. 70, 11. *Gmel. Ed. Syst. Nat.* i. 2629, 6. *Walkn. Faun. Par.* ii. 9, 8. *Schr. Faun. Boic.* 1946. *Turt. Syst. Nat.* iii. 394. *Latr. Hist. Nat. Ins.* xiii. 97, 11.
Baëtis fuscata, *Steph. Ill. Brit. Ent. Mand.* vi. 62, 13.
Cloë fuscata, *Pictet, Hist. Nat. Neur. Eph.* 251, 3, pl. 40, f. 1.

Europe.

4. Cloeon rumila.

Oculi fusci; mesothorax omnino niger; abdomen basi apiceque obscurum, medio pallidius; setæ caudales albæ; pedes albi, anteriores suturis fuscis; alæ non fasciatæ nec maculatæ, posticæ parvæ.

Ephemera parvula? *Scop. Ent. Carn.* 264, 687.
Cloë pumila, *Burm. Handb. Ent.* ii. 2, 799, 4. *Pictet, Hist. Nat. Neur. Eph.* 253, 4, pl. 40, f. 2. *Ramb. Hist. Nat. Ins. Neur.* 298, 5.
a.? England. Presented by F. Walker, Esq.

5. Cloeon translucida.

Oculi rufi; mesothorax fuscus, albo lineatus; abdomen basi apiceque obscurum, medio pallidius; setæ caudales albæ; pedes albi; alæ non fasciatæ nec maculatæ.

Cloë translucida, *Pictet, Hist. Nat. Neur. Eph.* 255, 5, pl. 40, f. 3, 4.
a, b. England.

6. Cloeon alpina.

Oculi maris obscuri; mesothorax lineis nullis aut pallidis; abdomen unicolor, transverse lineatum; setæ caudales fuscæ; alæ non fasciatæ nec maculatæ.

Cloë alpina, *Pictet, Hist. Nat. Neur. Eph.* 257, 6, pl. 40, f. 5.
Switzerland.

7. Cloeon melanonyx.

Oculi maris obscuri; mesothorax lineis nullis aut pallidis; abdomen fuscum invarium; setæ caudales flavæ, maculatæ; alæ non fasciatæ nec maculatæ.

Cloë melanonyx, *Pictet, Hist. Nat. Neur. Eph.* 258, 7, pl. 40, f. 6.
Switzerland.

8. Cloeon litura.

Oculi maris flavi; mesothorax fuscus, nigro vittatus; alæ non fasciatæ nec maculatæ.

Cloë litura, *Pictet, Hist. Nat. Neur. Eph.* 260, 8, pl. 4, f. 1—3.
Switzerland.

9. Cloeon fasciata.

Alæ distinctissime fasciatæ.

Cloë fasciata (*Kollar, MSS.*) *Pictet, Hist. Nat. Neur. Eph.* 262, 9, pl. 41, f. 4.

Brazil.

10. Cloeon undata.

Alæ quatuor maculis nebulosis.

Cloë undata, *Pictet, Hist. Nat. Neur. Eph.* 264, 10, pl. 41, f. 6.

Switzerland.

B. Alæ duæ.

11. Cloeon diptera.

Pallide rufescente-cinerea, segmentorum marginibus fuscescentibus; setis fusco punctatis; alis hyalinis, costa flavescente-fusco, albo marmorata, posticis nullis.

Ephemera diptera, *Linn. Syst. Nat. Ed.* 12, ii. 907, 11. *Gmel. Ed. Syst. Nat.* i. 5, 2630, 11. *Deg. Ins.* ii. 2, 650, 5, pl. 18, f. 5—7, fem., 8—10 mas. *Retz. Gen. Deg.* 57, 184. *Schrank, Faun. Boic.* 1947. *De Vill. Linn. Ent.* iii. 22, 21. *Rossi, Faun. Etrusc.* 677. *Oliv. Enc. Méth.* vi. 420, 16. *Fabr. Ent. Syst.* ii. 71, 16. *Latr. Hist. Nat. Crust. et Ins.* xiii. 99, 19. *Shaw, Gen. Zool.* vi. 253. *Zett. Ins. Lapp.* 1046. *Blanch. Hist. Nat. Ins.* iii. 54, 11.

Ephemera annulata, *Müll. Zool. Dan. Prodr.* 143, 1652, fem.

Ephemera striata? *Müll. Zool. Dan. Prodr.* 143, 1651, mas?

Cloëon pallida, *Leach, Edin. Encycl.* ix. 137.

Cloëon marmoratum, *Curt. Phil. Mag.* 1834, 121.

Cloëon obscurum, *Curt. Phil. Mag.* 1834, 121, Subimago.

Cloëon unicolor? *Curt. Phil. Mag.* 1834.

Cloëon dipterum, *Steph. Ill. Brit. Ent. Mand.* vi. 67, 1.

Cloë diptera, *Burm. Handb. Ent.* ii. 2, 798, 1. *Pictet, Hist. Nat. Neur. Eph.* 266, 11, pl. 42.
Cloë affinis, *Ramb. Hist. Nat. Ins. Neur.* 298, 4.

a—c. England. Presented by F. Walker, Esq.
d—f. England.

12. Cloeon horaria.

Fusca; abdomine cinerascente, segmentorum marginibus albis; pedibus pallidis; alis hyalinis, costa nigricante.

Ephemera horaria, *Linn. Syst. Nat. Ed.* 12, ii. 907, 9; *Faun. Suec.* 1476. *Fabr. Ent. Syst.* ii. 71, 13. *Gmel. Ed. Syst. Nat.* i. 5. *Berk. Syn.* i. 150. *Stew. El. Nat. Hist.* ii. 211. *Turt. Syst. Nat.* iii. 394.
Baëtis horaria, *Steph. Ill. Brit. Ent. Mand.* vi. 66, 15.
Cloë horaria, *Pictet, Hist. Nat. Neur. Eph.* 270. *Ramb. Hist. Nat. Ins. Neur.* 299, 7.

Europe.

13. Cloeon culiciformis.

Nigricans; abdomine fusco; pedibus pallidis; alis immaculatis.

Ephemera culiciformis, *Linn. Syst. Nat. Ed.* 12, ii. 907, 8. *Geoffr. Berk. Syn.* i. 150. *Stew. El.* ii. 211. *Turt. Syst. Nat.* iii. 394.
Baëtis culiciformis, *Steph. Ill. Brit. Ent. Mand.* vi. 66, 14.
Cloë culiciformis, *Pictet, Hist. Nat. Neur. Eph.* 270.

a. England.

14. Cloeon striata.

Fusca; abdomine maris albo pellucido, fœminæ opaco rufescente; alis hyalinis, venis subfuscis.

Ephemera striata, *Linn. Syst. Nat. Ed.* 12, ii. 907, 10. *Berk. Syn.* i. 150. *Stew. El. Nat. Hist.* ii. 212. *Turt. Syst. Nat.* iii. 394.
Baëtis striata, *Steph. Ill. Brit. Ent. Mand.* vi. 65, 11.
Cloë striata, *Pictet, Hist. Nat. Neur. Eph.* 270.

a—d. England.

15. Cloeon discolor, Fem.

Cinerea, subtus pallida; filamenta longius pilosa; alæ infuscatæ, ciliatæ, costa obscuriori. Long. 2⅓ lin.

Onycypha discolor, *Burm. Handb. Ent.* ii. 2, 797, 3.
Cloë obscura? *Ramb. Hist. Nat. Ins. Neur.* 297, 1.

Cape.

16. Cloeon halterata, Mas.

Pallida; oculi medii maximi rubri; abdomen apice ochraceum; filamenta alba, subcingulata. Long. 2½ lin.

Ephemera halterata, *Fabr. Ent. Syst.* ii. 69, 6. *Deg. Ins.* ii. 2, 27, pl. 17, f. 17, 18.
Cloë halterata, *Burm. Handb. Ent.* ii. 2, 798, 3. *Ramb. Hist. Nat. Ins. Neur.* 299, 6.

Europe.

Var.?
Cloë brunnea, *Ramb. Hist. Nat. Ins. Neur.* 298, 3.

Larger than *C. obscura*, Ramb.: body dull reddish, with paler legs: appendages of the male short, slightly diverging, not opposed, their tips short, somewhat pointed: wings brownish, fringed; second vein rather deeply bent after the middle.

South Spain.

Var.?
Cloë subinfuscata, *Ramb. Hist. Nat. Ins. Neur.* 298, 2.

Much larger than *C. obscura*, Ramb., which in other respects it just resembles: veins of wings thicker; extremity of costal space broader; second vein after the middle much more bent, so that the following space is broader.

South France.

17. Cloeon verna.

Pallide ferruginea; thorace piceo, ochraceo maculato; setis pallidis fusco punctatis; pedibus obscuris.

Baëtis verna, *Curt. Phil. Mag.* 1834, 121. *Steph. Ill. Brit. Ent. Mand.* vi. 66, 16.
Cloë verna, *Pictet, Hist. Nat. Neur. Eph.* 270.

a. England. Presented by F. Walker, Esq.

18. Cloeon autumnalis.

Pallide fusca; thoracis lateribus ochraceis; setis longissimis pallidis; pedibus luridis.

Baëtis autumnalis, *Curt. Phil. Mag.* 1834, 121. *Steph. Ill. Brit. Ent. Mand.* vi. 67, 17.
Cloë autumnalis, *Pictet, Hist. Nat. Neur. Eph.* 270.
England.

19. Cloeon cingulata.

Gracilis, fusca; abdominis segmentorum marginibus pedibusque posterioribus luridis; alis hyalinis.

Baëtis cingulata, *Steph. Ill. Brit. Ent. Mand.* vi. 67, 18.
Cloë cingulata, *Pictet, Hist. Nat. Neur. Eph.* 271.

a. England. Presented by F. Walker, Esq.

20. Cloeon ochracea.

Pallide rufo-ochracea; pedibus pallidioribus; alis hyalinis costa concolore; setis pallidis fusco subpunctatis.

Cloëon ochraceum, *Steph. Ill. Brit. Ent. Mand.* vi. 68, 2.
Cloë ochracea, *Pictet, Hist. Nat. Neur. Eph.* 271.

a. England.

21. Cloeon hyalinata.

Incarnata; pedibus pallidioribus; alis hyalinis, venis obsoletissimis.

Cloëon hyalinatum, *Steph. Ill. Brit. Ent. Mand.* vi. 68, 3.
Cloë hyalinata, *Pictet, Hist. Nat. Neur. Eph.* 271.

England.

22. Cloeon albipennis.

Nigra; abdominis basi pallida apice fusco; pedibus pallidis, geniculis nigricantibus; alis hyalinis.

Cloëon albipenne, *Steph. Ill. Brit. Ent. Mand.* vi. 69, 4.
Cloë albipennis, *Pictet, Hist. Nat. Neur. Eph.* 271.
Ephemera albipennis? *Fabr. Ent. Syst.* ii. 70.

England.

23. Cloeon unicolor.

Rufescente-ochracea; pedibus pallidioribus; setis albis immaculatis; alis hyalinis; costa apicem versus fuscescente.

Cloëon unicolor, *Curt. Phil. Mag.* 1834. *Steph. Ill. Brit. Ent. Mand.* vi. 69, 5.
Cloë unicolor, *Pictet, Hist. Nat. Neur. Eph.* 271.

England.

24. Cloeon cognata.

Piceo-rufa; abdominis basi pallidiore; pedibus setisque luridis, his fusco punctatis; alis hyalinis.

Cloëon cognatum, *Steph. Ill. Brit. Ent. Mand.* vi. 69, 6.
Cloë cognata, *Pictet, Hist. Nat. Neur. Eph.* 272.

England.

25. Cloeon dimidiata.

Castaneo-fusca; prothoracis lateribus puncto ochraceo; pedibus stramineis.

Cloë dimidiata, *Pictet, Hist. Nat. Neur. Eph.* 272.
Cloëon dimidiatum, *Curt. Phil. Mag.* 1834, 121. *Steph. Ill. Brit. Ent. Mand.* vi. 69, 7.

England.

26. Cloeon virgo.

Pallida; oculis nigris; femoribus anticis apicem versus obscuris; alis hyalinis.

Cloëon virgo, *Steph. Ill. Brit. Ent. Mand.* vi. 70, 8.
Cloë? virgo, *Pictet, Hist. Nat. Neur. Eph.* 272.
Ephemera virgo? *Oliv. Latr. Hist. Nat. Ins.* xiii. 98.

England.

Genus 6. CÆNIS.

Oculi remoti, maris simplices. Pedes bene determinati. Alæ duæ, venis transversis paucis.

Cænis, *Stephens; Pictet.*
Ephemera, p., *Fabr.*
Brachycercus, *Curt.*
Oxycypha, *Burm.*
Ephemeræ trisetæ, p., *Zett.*
Cœnidæ, *Newman.*

Eyes simple in both sexes, and always separated by a broad interval: wings two, much rounded on the internal border, fan-shaped, almost without transverse veins: body short and broad: ungues of the tarsi terminated by two small laminæ; three tail-bristles of equal length, very long in the male, and very short in the female.

1. Cænis lactea.

Cinerea; setæ caudales immaculatæ; pedes anteriores cinerei.

Oxycypha lactea, *Burm. Handb. Ent.* ii. 796, 1.

(Subimago) Brachycercus chironomiformis, *Curt. Phil. Mag.* 1834.—*Ochracea nitida; oculis nigris; pedibus pallidis; alis lacteis, costa fusca.*

Cænis chironomiformis, *Steph. Ill. Brit. Ent. Mand.* vi. 62, 6.
Cænis lactea, (*Hoffm. MSS.*) *Pictet, Hist. Nat. Neur. Eph.* 276, 1, pl. 43, f. 1—4; pl. 44.

Europe.

2. Cænis grisea.

Flava; setæ caudales immaculatæ; pedes anteriores albi.

Cænis grisea, *Pictet, Hist. Nat. Neur. Eph.* 278, 2, pl. 45, f. 1, 2.
Switzerland.

3. Cænis argentata.

Cinerea; setæ caudales fusco obscuro pallidoque indistincte annulatæ.

Cænis argentata, *Pictet, Hist. Nat. Neur. Eph.* 279, 3, pl. 43, f. 6.

Switzerland.

4. Cænis varicauda.

Flava; setæ caudales nigro flavoque scite annulatæ.

——— *Descript. Egypte, Neuropt.* pl. 2, f. 6 (mas), f. 7 (fœm.)
Cænis varicauda, (*Kollar, MSS.*) *Pictet, Hist. Nat. Neur. Eph.* 281, 4, pl. 43, f. 5.

Egypt.

5. Cænis luctuosa.

Nigro-fusca aut nigra; pedes anteriores flavi, distinctissime fusco notati; alarum venæ costali excepta indistinctæ.

Oxycypha luctuosa, *Burm. Handb. Ent.* ii. 797, 2.
Cænis luctuosa, *Pictet, Hist. Nat. Neur. Eph.* 283, 5, pl. 45, f. 3.
Germany.

6. Cænis oophora.

Nigro-fusca aut nigra; pedes anteriores omnino flavi; alarum venæ sat distinctæ.

Cænis oöphora, (*Kollar, MSS.*) *Pictet, Hist. Nat. Neur. Eph.* 284, 6, pl. 45, f. 4.
Sardinia.

7. Cænis dimidiata.

Piceo-nigra; abdomine pallido; pedibus ochraceis; alis lacteis costa fusca.

Cænis dimidiata, *Steph. Ill. Brit. Ent. Mand.* vi. 61, 2. *Pictet, Hist. Nat. Neur. Eph.* 286.
Brachycercus minimus, *Curt. Phil. Mag.* 1834, 122.
England.

8. Cænis brevicauda.

Piceo-fusca; abdomine pedibusque pallidis; setis brevibus; alis albidis, costa fusca.

Ephemera brevicauda, *Fabr. Ent. Syst.* ii. 69.
Cænis brevicauda, *Steph. Ill. Brit. Ent. Mand.* vi. 61, 3. *Pictet, Hist. Nat. Neur. Eph.* 286.
a, *b*. England.

9. Cænis Harrisella.

Pallida; alis hyalinis, costa concolore.

Ephemeron, *Harris, Exp.* pl. 6, fig. 3.
Brachycercus Harrisellus, *Curt. Phil. Mag.* 1834, 122.
Cænis Harrisella, *Steph. Ill. Brit. Ent. Mand.* vi. 61, 4. *Pictet, Hist. Nat. Neur. Eph.* 286.

England.

10. Cænis pennata.

Thorace lato fusco-ferrugineo; abdomine pedibusque albidis; oculis atris; setis brevibus pennatis.

Cænis pennata, *Steph. Ill. Brit. Ent. Mand.* vi. 61, 5. *Pictet, Hist. Nat. Neur. Eph.* 286.

England.

11. Cænis interrupta.

Atra, nitida; abdomine pallido, strigis duabus dorsalibus atris interruptis; pedibus fuscis; alis fuscescentibus, costa saturatiore.

Cænis interrupta, *Steph. Ill. Brit. Ent. Mand.* vi. 62, 7. *Pictet, Hist. Nat. Neur. Eph.* 287.

England.

12. Cænis macrura.

Fusco-nigra; abdomine piceo; pedibus piceo-fuscis; alis hyalinis, costa fusca; setis longissimis.

Cænis macrura, *Steph. Ill. Brit. Ent. Mand.* vi. 60, 1.

England.

13. Cænis hilaris.

Alba, minuta; stethidium pallide fulvum; abdomen punctis lateralibus fuscis.

Ephemera hilaris, *Say, Journ. Acad. Nat. Sci. Phil.* viii. 43.

White, minute: eyes black, double: stethidium pale fulvous: pleura and pectus with a few abbreviated dusky lines: abdomen depressed, with three brownish punctures on each side towards the tip: setæ long: wings ample; costal border slightly dusky. Length one-tenth of an inch.

Indiana.

14. Cænis diminuta, Mas.

Fulva; abdomen testaceum; setæ albæ, corpore quadruplo longiores; pedes albi, antici fasciis duabus vel tribus nigricantibus; alæ limpidæ, venis albis ad costam nigricantibus.

C. hilaris, var.?

Male.—Tawny: abdomen pale testaceous, not longer than the thorax: setæ white, about four times the length of the body: legs white: fore-legs with two or three blackish bands: wings limpid; veins white, blackish along the fore border. Length of the body 1¼ line: of the setæ 6 lines; of the wings 3 lines.

a. St. John's Bluff, E. Florida. Presented by E. Doubleday, Esq.

15. Cænis Sinensis.

Fusco-fulva, subtus testacea; antennæ albidæ, articulis 1o et 2o apice fuscis; thorax testaceo bivittatus; abdomen album, basi et apice fuscum; alæ limpidæ, venis albis.

Brownish tawny, testaceous beneath: antennæ whitish; tips of the first and second joints brown: thorax with two slender, testaceous stripes: abdomen white, hardly twice the length of the thorax, brown at the base and towards the tip: wings limpid, veins white, few and slender. Length of the body 2 lines; of the wings 4 lines.

a. China. Presented by G. T. Laye, Esq.

16. CÆNIS PERPUSILLA.

Testacea; setæ albæ, corpore quadruplo longiores; pedes albi; alæ limpidæ, antice subcinereæ, venis albis.

Pale testaceous: abdomen a little longer and paler than the thorax: setæ white, about four times the length of the body: legs white: wings limpid, with a grayish tinge on the fore border of the fore-wings; veins white. Length of the body 1¼ line; of the setæ 6 lines; of the wings 3 lines.

a. Ceylon. Presented by R. Templeton, Esq.

Genus 7. OLIGONEURIA.

Oculi maris simplices. Pedes informes; tarsi filiformes. Alæ quatuor, venis transversis paucis.

Oligoneuria, *Pictet, Hist. Nat. Neur. Eph.* 289.

Wings four; fore-wings triangular, with only seven longitudinal veins, and with some cross-veins near the fore border; hind-wings large, with four longitudinal veins, without cross-veins: legs distorted; tarsi filiform: three short tail-bristles.

1. OLIGONEURIA ANOMALA.

Oligoneuria anomala, (*Kollar, MSS.*) *Pictet, Hist. Nat. Neur. Eph.* 291, pl. 46, 47.

Brazil.

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